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ABSTRACT

The study described in this report was conducted by by the Research Triangle Institute as an inquiry into the staffing patterns, funding allocation formulas and procedures, enrollment trends, and mission and governance of the North Carolina Community College System (NCCCS) and its 58 institutions. Section I of the report provides an introduction to the study, its design and specific objectives, the national and regional context, the history and current composition of the NCCCS, and the organization of the study activities and research questions asked. Section II outlines procedures which included a literature review; an analysis of enrollment, funding, and staffing data of public record; site visits to 12 representative institutions; a survey of all 58 NCCCS colleges; a student survey; interviews with state and institutional administrators; and interviews with other personal contacts. The section also delineates the uses of the information collected and limitations. Sections III, IV, and V present findings, conclusions, and recommendations related to: (1) staffing; (2) methods of calculating student enrollments; (3) trends in the mix of full- and part-time students and the impact of more part-time students on the need for administrative and support personnel; (4) governance, administration, and programs related to the mission of the NCCCS; (5) conversion of technical institutes or colleges to community colleges; and (6) tuition for college transfer courses. (RO)

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The North Carolina Community College Study:
Mission, Enrollment and Staffing Patterns, Funding Procedures, and Administration and Governance

FINAL REPORT

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Prepared for
The North Carolina State Board of Community Colleges

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May 1986
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The interpretations and opinions presented in this report are solely those of the RTI Evaluation team, and no endorsement of the findings and recommendations, in whole or in part, by the North Carolina Department of Community Colleges, the State Board, the institution presidents, or any associated group should be inferred.

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Executive Summary

The North Carolina Community College Study: Mission, Enrollment and Staffing Patterns, Funding Procedures, and Administration and Governance

The Tasks

In the 1985 Legislative session, the North Carolina General Assembly asked the State Board of Community Colleges to determine, through an outside, independent study:

(1) proper staffing patterns for the System institutions;

(2) appropriate methods of calculating the FTE;

(3) the impact of more part-time students on needs for administrative and support personnel;

(4) the effectiveness of current governance and administration;

(5) whether technical institutions should convert to community colleges; and

(6) whether tuition for college transfer courses should be increased to University System levels.

Procedures

In a consequent study begun in November 1985, the Research Triangle Institute examined certain information of public record maintained by the Department of Community Colleges, with emphasis on enrollment, staffing, and budget allocation data since 1978-79; conducted an extensive study, including on-site interviews, with senior administrative staff at 12 representative institutions; requested, from all 58 institutions, information on mission, special constituencies, staffing, adequacy of allocations by line item, developmental priorities, intra-term enrollment trends, and transfer credit agreements; surveyed students' interest in and use of special services and facilities; and conducted interviews with the State President, the members of the State Board, and a sample of local board members and their presidents. Focus group interviews were also held with small groups of students, prospective students, and local community and business leaders.

Findings in Regard to Staffing

- Staffing patterns across the 58 institutions vary considerably, as a function of institutional size, student and staffing markets, and under allowable options, local solutions in assignment of personnel allocations to positions and salaries. It is apparent as well that the institutions are operating under extreme budget stringencies.

- Although the System trend is toward increased numbers of part-time students, there is considerable variability among the 58 institutions and among curriculum programs in current mix of full-time and part-time students. For example, in 1984-85, the proportions of curriculum students who were full-time varied from 16 percent to 58 percent; and, while three institutions had the same or larger proportions of full-time curriculum students in 1984-85 than in 1978-79, three institutions at the other extreme had less than half the proportions of full-time curriculum students in 1984-85 than in 1978-79.

- Differences among the institutions appear with equal clarity in terms of numbers of students (the unduplicated headcount, or UDHC) relative to FTE (the index based on student contact hours used in budget formula allocations): institutional UDHC/FTE ratios in 1984-85 ranged from 3.2 to 1, to 8.6 to 1, with median value of 5.1 to 1. The comparable values in 1978-79 were from 2.9 to 1 to 6.6 to 1, with median value of 4.7 to 1.

- No clear association between staffing patterns, or between perception of staffing needs, and enrollment mix, were found. It was concluded that under the circumstances of budget stringencies and allowable local flexibilities, institutions develop their own relatively unique responses to cover the most urgent operational needs, emerging with varying solutions (e.g., replacing full-time with part-time staff, deferring lower priorities, requiring overtime work, using administrators as instructors, etc.).

- A number of administrative and instructional support positions were identified by the presidents as controlled by numbers of students rather than FTE. These include such positions as counselors, financial aid officers, registrars' staff, librarians, testing specialists, placement and follow-up staff, and accounting clerks. Part-time students--and in particular, those taking slightly less than full academic loads--confirm their interest in and need for the various instructional support services.

Findings in Regard to Methods of Calculating the FTE

- The FTE was found to be the most generally appropriate basis for allocating operating funds to the institutions, in terms of its capability to reflect the instructional staff work load. It does not recognize, however, certain real variations in costs due to differences in local labor markets; differences among programs because of going rates in industry for professionals who are recruited to staff positions; varying capabilities, because of particular program demands for small classes as well as size of institution, to meet the 22 to 1 student/teacher ratio; the actual costs of occupational extension instruction; and other factors unique to some but not all institutions.

- Although curriculum FTE enrollments as presently calculated are estimated to shrink by the end of the quarter in varying degrees dependent on program (by a median value of 15 or 16 percent), commitments to teaching faculty and students for course offerings must be made by the end of the drop/add period following registration each term; instructional costs remain relatively fixed after this point, regardless of attrition. The end of the drop/add period for most institutions is very close to the 20 percent point now used for calculating the FTE.

- A fairly significant variation in enrollments, by institution as well as for the System as a whole, does exist across the four quarters of the academic year. This variation is greater for curriculum than for extension programs, as summer quarter enrollments in the curriculum programs in particular tend to be lower than in the three other terms.

Findings in Regard to Effectiveness of Goverance and Administration

- The governance and administrative structure of the Community College System is relatively unique when compared with other states.
- The tradition of local control through the institutional boards appears to be working well and in accordance with current statutes and regulations.
- At the same time, there is a general perception of the value of a true "confederation" of the institutions into a System, with the State Board serving as the overall policy agent and as the prime representative to the General Assembly on overall fiscal needs. The special allocation tradition is seen by all parties--i.e., at both the State and local levels of governance and administration--as undermining both equitable assignment of funds to System priorities, and the proper authority of the State Board under the statutes.
- While the State Board is seen as the proper authority for governing and representing the System as a whole, there is mixed opinion concerning its effectiveness.
- The institution presidents are found to be, in general, a cadre of diverse individuals operating with considerable integrity, with their prime responsibilities to their boards, and with their boards to the needs of their communities.

Findings in Regard to Conversion to Community College Status

- A variety of issues, some discrete and some overlapping, are involved in conversion of technical institutions to community college status.
- The "community college" is viewed, by the communities and prospective students, as of higher educational status than the "technical college" or "technical institute." This may account in part for the fact that the last ten institutions to convert have not only met the minimum college transfer enrollment requirements in the two years following, but also have generally experienced increased enrollment in technical and vocational programs at higher rates than for the System as a whole.
- It is highly likely that the college transfer program appeals primarily to those for whom other academic higher education options are restricted, and the net effect of conversion on nearby four-year colleges appears to be one of increasing, not decreasing, their enrollment.

- It is generally believed that the addition of a college transfer program strengthens, not weakens, the vocational/technical programs. The vocational/technical mission appears not to be jeopardized by conversion.

- Virtually all of the System institutions have contractual arrangements with one or more senior institutions to accept transfer credit for general education, vocational, or technical programs. Yet, for courses outside a college transfer program in particular, acceptance by senior institutions for credit toward a baccalaureate degree is not assured.

- Conversion to community college status will result in increases in costs to the State, although these costs will probably be lower than recent worst-case estimates.

Findings in Regard to Increase of College Transfer Tuition to University System Levels

- Increases in college transfer tuition to the lowest of the current four University System tuition rates would result in an increase in tuition of about 129 percent for the community college students involved. Based on a conservative estimate of all costs associated with community college attendance, the increase in total cost to the student would be only about 17 percent.

- A change in tuition for college transfer courses is vigorously opposed by the institutions, not only on grounds of threat to educational opportunity for many constituents, but also because of difficult policy and operational issues involved in determining what fees to charge whom, discrimination against college transfer students, inverse relationship to program costs, etc.

- General fund revenues would probably increase if the lowest University System level tuition were changed, and if there were no changes in enrollment in college transfer courses from the 1984-85 levels. An upper limit to this increase would be in the neighborhood of $3 million.

- Modest increases in tuition across the board are not viewed as potentially significant deterrents by students and prospective students contacted.

Recommendations

Some 29 specific recommendations are made in the full report. The most important are:

- Base the additional allotment for administrative and instructional support positions on the Unduplicated Headcount rather than FTE; determination of the per-UDHC unit cost may be established through audit of current costs.

- Base allocation of instructional costs, for the present, on the FTE. Consideration should be given to increasing the per-FTE allotment, however, because of the stringencies imposed by present values in terms of number of positions and salaries.

- Calculate the FTE for budget allocation purposes at the end of a standard drop/add period, when financial and enrollment data of audit quality are available and when institutional commitments to students and staff are made. Operational simplification should be accomplished by making this count a part of the Prime system.

- Conduct a detailed study of the actual costs of instruction over the various programs with the objective of establishing revised budgeting formulas to reimburse institutions for actual costs for their program and student configurations.

- Maintain the present governance and administration structure of the System. The State Board should be strengthened to permit more effective discharge of its responsibilities delegated by the basic legislation, through more forceful assumption of existing responsibilities, or possibly through structural changes by the General Assembly.

- Re-examine the tradition of special allocations by the General Assembly, in terms of its potential deleterious impact on equity among the institutions, and on the strength of the State Board to operate the System as a System.

- Continue to permit applications from institutions desiring to convert to community college status, as their constituents and boards declare interest and readiness. It is not recommended--nor believed likely--that all technical institutions should be converted at one point in time to community college status. Neither is it recommended that no further conversions be considered.

- Require institutions desiring to convert to community college status to provide additional information in regard to program content, costs, acceptance by area colleges and universities, and impact on the vocational/technical mission.

- Include carefully established estimates of net costs to the State with recommendations by the State Board to the General Assembly for conversion to community college status.

- Maintain tuition for college transfer courses at the same level as for other curriculum courses. While increase in tuition for college transfer (or other) courses to University System levels is not recommended, this does not rule out consideration of modest across-the-board increases in tuition rates for the Community College System.

Acknowledgements

The authors take full responsibility for the findings stated in this report, and acknowledge as well the freedom given by the Department in drawing the conclusions. Yet, the study would not have been possible without considerable contributions of time, energy, thought, and information from many System representatives who may properly be proud of their part in what North Carolina is achieving in its rather remarkable community college enterprise.

To acknowledge appropriately the several hundred individuals who gave so freely of their time and selflessly of their insights would be impossible. Yet, we would be remiss if we did not take note of some whose grasp of System mission and whose part in the real accomplishments of its institutions were infectious, and who made our otherwise difficult task a labor of love.

Many individuals in the Department of Community Colleges were of particular help. We recognize in particular our project officer and departmental liaison, Dr. Leigh Hammond, Vice President for Planning and Research, and his able assistants Betty West and Steve Ijames, who were tirelessly responsive to our frequently burdensome requests. Dr. Tom King, Vice President for Fiscal Affairs, and his staff were patient and helpful in introducing us to the intricacies of the budgeting and allotment process. Ms. Kathy Baker Smith, Assistant to the State President for Policy, was particularly sensitive to underlying issues and to sharing with us prior working papers on critical policy issues. Dr. Ed Wilson, Executive Vice President, was a frequent voice of wisdom. Ms. Charlotte Ashcraft, of the Fiscal Research Division of the Legislature, was exceptionally helpful in providing deeper insights into the substance of legislative concerns.

We are especially grateful to the presidents, who responded in many different styles, but who were of one voice in manifest concern for their communities and in their dedication to assuring viability and service of their institutions. The experience and observations they shared with us, and the access granted us to their staff, students, and local business and community leaders, took considerable time, but left no doubts as to what they and their boards have collectively accomplished. We were impressed not only with their fierce advocacy of their institutions and programs, but also with their capability to make larger System concerns ascendant when such would be to the larger public good.

The presidents and their board members also helped the study team recognize that the bottom line of the enterprise is the later impact on the community of what goes on in the classroom, and that the relationship of one aspect or component of the System to another is meaningful only to the extent that that bottom line is not obscured in the process. We and the State owe them our considerable gratitude.

Junius A. Davis
RTI Project Director

THE NORTH CAROLINA COMMUNITY COLLEGE STUDY: MISSION, ENROLLMENT AND STAFFING PATTERNS, FUNDING PROCEDURES, AND ADMINISTRATION AND GOVERNANCE

I. INTRODUCTION

A. Overview

This is a report of an inquiry, by the Research Triangle Institute (RTI), into the staffing patterns, funding allocation formulas and procedures, enrollment trends, and System mission and governance of the North Carolina Community College System and its 58 institutions. The study was mandated by the North Carolina General Assembly in 1985, and conducted under contract with the State, through the North Carolina Department of Community Colleges, for the State Board of Community Colleges and for the North Carolina General Assembly.

B. Study Design and Specific Objectives

In the 1985 legislative session, the North Carolina General Assembly passed a provision that:

"The State Board of Community Colleges shall have an outside, independent study conducted to determine the following:

(1) Proper staffing patterns for institutions within the Community College System with special emphasis on the implication for base and enrollment formula allotments;

(2) An analysis of methods of calculating the number of students with an emphasis on the most appropriate census date for collecting enrollment data and the use of traditional academic quarters for determining curriculum enrollments;

(3) The impact the shift to more part-time students has had on the need for Administrative and Instructional Support Personnel;

(4) Whether the current System's governance, administration and programs are effective in fulfilling the System's mission;

(5) Whether the System's mission and its effectiveness in fulfilling its mission is best served by permitting technical colleges to convert to community colleges; and

(6) Whether tuition for college transfer courses should be comparable to tuition charged by the constituent institutions of the University of North Carolina."

The General Assembly further provided that the Board report the findings of this study to the chairmen of the Appropriations Base and Expansion Budget Committees of the Senate and the House of Representatives and the Fiscal Research Division prior to the convening of the regular 1986 session of the 1985 General Assembly.

C. The National and Regional Context

Nationally, the role of the public two-year institutions is changing in important ways. The impacts of enrollment decline evident in elementary/secondary schools since the 1970s can be expected to continue to affect higher education in the 1980s. Growth in postsecondary participation of women, older students, and part-time students is projected to continue in the remainder of this decade. According to the National Center for Education Statistics, the increased enrollment of older students is expected to offset about half of the decline in the FTE enrollment of traditional age students. It is anticipated that the smaller rural institutions may experience greater difficulties in attracting students than larger institutions, or institutions in metropolitan areas.[1]

Two year institutions are essential to the provision of saleable skills relevant to occupational employment in a swiftly changing and increasingly technological workplace. Current Population Survey data for 1982 on educational achievement suggest that median years of schooling for those employed is less than 13 years. Less than 25 percent of the workforce has college degrees, which in other words means that over 75 percent of all jobs currently require less than four years of college for employment. Two year postsecondary institutions are therefore not only in the mainstream of educational consumer demand, but are critical to the nation's economic and technological future. The ability of two year institutions to pursue flexible admissions policies and scheduling, as well as provide low tuition costs for students, makes them potentially highly appropriate for serving the needs of increasing numbers of parttime students who combine education with work.

1/ The Condition of Education. Washington, DC: National Center for Education Statistics, 1984.

In North Carolina, postsecondary education and training are crucial to the continued economic development of the state. Recent studies[2] emphasize that work which formerly called for "skilled labor" now calls for "technologists." Accelerated automation is changing the characteristics of work in manufacturing occupations.[3] Traditional low wage labor on which Southern manufacturing industries have in the past relied is now provided by overseas competitors. Evidence now indicates that, contrary to past patterns, local industrial growth in the US is beginning to be associated with levels of educational attainment.[4] It follows therefore that educational quality is functionally related to regional economies. As industrial and occupational technologies change, education must be ready to respond.

Not only are new skills required in today's workplace, but new adaptability is increasingly necessary on the part of all of us to keep pace with job changes. The relatively low levels of educational attainment in North Carolina ensure that two year postsecondary institutions are uniquely placed to provide an indispensable public service in the interface between student needs for education and training and the demands of the workplace. A strong public commitment to this essential component of higher education in North Carolina is necessary to prevent future economic growth in the state from being compromised.

2/ See, for example: Looking Forward: Visions of the Future of the South. Research Triangle Park, NC: Southern Growth Policies Board, 1985.

3/ Lawrence, J. E. S., and Drewes, D. W. "Characteristics of Work." Paper presented to the Southeastern Psychological Association Convention, Orlando, Florida, March 27, 1986.

4/ Rosenfeld, S. A., Bergman, E. M., and Rubin, Sara. After the Factories: Changing Employment Patterns in the Rural South. Research Triangle Park, NC: Southern Growth Policies Board, 1985.

D. The North Carolina Community College System: Brief History and Current Composition

1. Origin and Mission

The North Carolina Community College System evolved out of a concern, soon after World War II, that new and generally accessible training programs were needed to respond to the rapid shift from an agricultural to an industrial economy. Accordingly, the North Carolina General Assembly enacted in 1963 General Statute 115 A to:

> provide for the establishment, organization, maintenance, and administration of a system of educational institutions throughout the State offering courses of instruction in one or more of the general areas of two-year college parallel, technical, vocational, and adult education programs... The major purpose of each and every institution operating under the provision of this (legislation) shall be and shall continue to be the offering of vocational and technical education and training, and of basic high school level, academic education needed in order to profit from vocational and technical education, for students who are high school graduates or who are beyond the compulsory age limit of the public school system and who have left the public schools. (1963, c.448; s.23, as later amended by 1969, c. 562, s.1; 1979, c.462, s.2; and 1983, s.1).

Building on a base of several public junior colleges and industrial education centers, 24 institutions were initially organized in 1963. Rapid expansion followed, as local communities authorized tax and bond support for the establishment of their own institutions; by 1969 there were 54 institutions. The System currently contains 58 institutions, with enrollment, in the 1984-85 academic year, of 624,351 individual students, or a full-time equivalent (FTE) of 121,261. This FTE reported is based on N.C. budget formula conventions; for definition, see Subsection I.C.5 following.

2. Government and Administration

The original legislation placed the System under the State Board of Education, whose chairman at that time was a vigorous advocate for the new vocational and technical training as well as for the right of the individual, whatever his station or economic means, to basic and general education. A separate State Board of Community Colleges was established by the General Assembly in 1979, whose 19 members assumed full responsibility for the System on January 2, 1981. Under the current legislation, the State Board has authority to adopt and administer all policies, regulations, and standards that it may deem necessary for the operation of the Department of Community

Colleges, which is a principal administrative department of State government. The Department is headed by a State President, elected by the State Board, who acts as the chief administrative officer of the System, with staff nominated by the State President and approved by the State Board. The individual institutions are, through the enabling legislation, governed by 13 member boards of trustees with 12 members selected by the local Boards of Education, the Boards of County Commissioners, and the Governor, and with an ex-officio non-voting student member. The local boards have the authority to elect the institutional president (subject to the approval of the State Board) and serve as a body corporate with powers to acquire, hold, and transfer real and personal property, to enter into contracts, to institute and to defend local actions and suits, and to be generally responsible for the management and administration of the institution as provided under the general statutes.

3. Institutional Classification According to Program

Twenty-four of the 58 institutions are, in 1985-86, "community colleges," or are authorized to provide college transfer programs leading to the associate in arts, associate in fine arts, and associate in science degrees. Of these, 11 were established as community colleges under the 1963 legislation or came into the System as such under prior legislation; 12 were created through conversions from technical institutes (the last in 1983) and one was a private junior college admitted to the System in 1973. While other curriculum programs are established on the basis of justified need with the State Board being the final authority, college transfer programs require approval beyond the State Board; and, transfer of funds from other areas to college transfer programs, unlike most other budget transfers, requires specific approval by the State Board. Of the 24 institutions offering college transfer credit, 18 are located in counties that have no other colleges.

4. Current Enrollment and Specific Programs, and Educational Opportunity

In the most recent year in which enrollment data are complete (1984-85), the 58 institutions ranged in size from unduplicated headcount enrollments of 1,437 to 49,990. Programs are offered in two general areas: credit-bearing curriculum programs, consisting of college transfer (where authorized), general education, special credit, vocational, and technical programs; and continuing education or "extension" programs, providing non-credit special community service courses in occupational areas, adult high school, adult basic education, other academic areas, in-plant training, training for new or expanding industries, avocational areas, and practical skills. For the System as a whole, the 1984-85 unduplicated headcount and FTE enrollments were distributed among these programs are shown in Table 1.

Tuition charges, set by the General Assembly, are minimal ($4.25 per credit hour or $51.00 per quarter for students taking 12 or more credit hours of instruction), and more than 90% of the population of the State reside within 25 miles of a System institution; thus, the System has been and is a significant force in providing access to educational and training opportunity for all citizens of the State.

5. Fiscal Support

Under the enabling legislation, state financial support is provided by budgetary action of the General Assembly through the State Board for (1) the Plant Fund (furniture and equipment, library books, and other items of capital outlay for administrative and instructional purposes), and, on an equal-matching basis, funds for purchase of land and the construction and remodeling of buildings; (2) current operating expenses (salaries and other costs for general administration, instructional staff, and instructional support staff); (3) additional support for institutions serving residents from three or more assigned counties; and (4) funds for lawful premiums of liability insurance. The State Board is also authorized to accept, receive, use, or reallocate any federal funds or aids designated for purposes within the mission and programs of the System institutions.

Local financial support, through the tax-levying authority of each institution, is provided for (1) the Plant Fund (land acquisition, erection of all buildings, alterations and additions to buildings, purchase or rental of vehicles and all equipment necessary for plant maintenance and operation, and purchase of furniture and equipment not provided for administrative and instructional purposes); (2) plant operation and maintenance (e.g., utilities, janitorial supplies, maintenance of grounds and buildings, and equipment for plant operation and maintenance); and (3) support services (e.g., costs of insurance, tort claims, bonding of employees, legal fees, and elections held for providing local funds in accordance with the Statutes). The local boards may also apply local public tax funds provided and private funds to supplement state-financed items in the current expense budgets.

Table 1

Distribution of 1984-85 Students Among Programs in the NC Community College System: Unduplicated Headcounts and FTE

	Numbers Enrolled			
	UDHC No	% of Total	FTE No	% of Total
Curriculum Programs:				
College Transfer	31,722	5.0	8,561	7.1
General Education	16,362	2.6	2,942	2.4
Technical	124,158	19.9	43,722	36.1
Vocational	33,964	5.4	18,663	15.4
Curriculum Subtotal	206,206	(33.0)	73,888	(60.9)
Extension Programs:*				
Academic	132,853	21.3	4,165	3.5
Occupational	226,728	36.3	19,775	16.3
Practical Skills	32,385	5.2	2,746	2.3
Avocational	56,718	9.1	6,104	5.0
Recreational	548	0	N.A.	
Adult High School	(NA)		3,607	3.0
State ABE	(NA)		7,786	6.4
Other Non Budget Extension	(NA)		3,190	2.6
Extension Subtotal	418,145	(67.0)	47,373	(39.1)
Total	624,351	(100.0)	121,261	(100.0)

* Individual extension programs include some UDHC students also counted in other extension programs; the UDHC Extension Subtotal is correct.

Source: 1984-85 Annual Enrollment Report, North Carolina Department of Community Colleges.

State funds, generally constituting 85-90 percent of the annual budgets for the individual institutions, are provided to the institutions on the basis of a unit of instruction (a full-time equivalent student, or "FTE") based on student membership hours. Student membership hours are calculated on the basis of contact time in scheduled classes, shops, or laboratories for which the student is enrolled. Sixteen student membership hours per week for 11 weeks or 176 student membership hours for each quarter enrolled constitute a quarterly full-time equivalent student; 704 student membership hours (176 hours per quarter times 4 quarters) constitute an annual FTE.

Counts of student membership hours are required each quarter at the 20 percent point in the class schedule (thus allowing for attrition between the close of registration and this point, but not for attrition after this point). The FTEs generated are used by the Department to establish enrollment projections for each institution; institutional budgets are derived by assigning values to the FTEs on a formula basis. The formulas assume one instructor per 22 FTE at the currently appropriated salary unit value with other associated instructional costs based similarly on appropriated levels; instructional support and administrative costs are also driven by assumptions as to numbers of staff and appropriate salary levels required per FTE (beyond a base allotment reflecting minimal administration and instructional support regardless of institutional size). Other major state budget line items (e.g., equipment; library books), with the exception of the president's salary (based on a separate schedule), are also based on the FTEs generated by each institution. For purposes of determining instructional costs, FTEs generated by extension programs (other than Adult Basic Education, which is funded at the curriculum program level, and certain courses required to be self-supporting) are assigned per-FTE values at a lower rate (currently, about 34 percent of the value established for the curriculum programs).

E. Organization of the Study Activities and Research Questions Addressed

The study reported herein was organized in six tasks corresponding to the six specific objectives of the legislative mandate. These tasks, and the major research questions, are briefly presented as follows:

1. Task 1: Proper Staffing Patterns

As noted in the prior subsection, institutional staffing allocations in all but a few custodial or maintenance positions are determined on the basis of class membership hours; this essential determinant has been in effect since 1978. However, since that time, a number of changes have occurred that may raise questions as to the appropriateness of the procedure. Most importantly, the number of less than full-time students relative to the number of full-time students has increased, with relatively little change, and recent decline for the System as a whole, in the FTE based on class membership hours. But also, certain new positions have been required or recommended without specific provision in the allocation formulas (e.g., compliance officers; institutional research specialists; computer system specialists and increasingly, development officers, and public information officers and institutional marketing personnel); and, program mix (which may have staffing implications) has changed. The general issue of proper staffing patterns may thus be broken down into the following more specific tasks:

- Analysis of existing staffing patterns in the 58 institutions, with detailed study of the twelve institutions in our sample;
- Examination of the forces affecting staffing distributions across institutions; and
- The appropriateness of the current formulas for allocation of state dollars for institutional staffing.

2. Task 2: Methods of Calculating Student Membership Hours

Student membership hours calculated at the 20 percent point each quarter are the basic ingredient (or variable) reflecting units of instruction for the budgeting and allocation procedures; and, this value determines specific line item allocations for all state budget items except the president's salary and some special purpose allocations. In general, the question is raised as to the appropriateness of the basic variable, the degree to which it is affected by the time and manner in which it is assessed, and the impact of other circumstances or situations on the adequacy and cross-institutional equity of this base for budgeting and allocation. The specific questions addressed are:

- What is the most appropriate time during the quarter to count enrollment?
- What is the best way of measuring annual enrollments?
- What is the financial impact of choosing one census date versus another?

- What is the impact of census date choice on program accessibility?
- What control mechanisms are needed to assure the timely reporting of accurate enrollment data?
- What is the most appropriate basis for incorporating enrollment data into the budgeting process?

3. Task 3: Impact of the Shift to More Part-Time Students on Administrative and Instructional Support Personnel

This issue, a part or extension of the basic issue in Task 1, is concerned particularly with the impact of a larger number of students, which may affect certain administrative or instructional support needs. This question has to do with the adequacy and appropriateness of FTEs based on class membership hours (which have not increased correspondingly to numbers of students) to determine the support needed for administrative and support functions. More specifically, such research questions as the following are raised:

- How does the shift to more part-time students impact overhead costs in terms of personnel and money?
- To what extent do part-time students need, use, or desire student services?
- Are the changes in full-time/part-time student mix consistent or even across programs and institutions? If not, what are the implications for adequacy of funding, or, more specifically, for the impact of funding on the kind and quality of programs and services provided?
- Are the perceptions of particular staffing needs affected by the institutional condition in terms of full-time/part-time student mix? In terms of the ratio between numbers of students (the unduplicated headcount) and the FTE generated?
- Is failure to recognize any associated costs in the changes in student mix detrimental to the effective fulfillment of system mission?

4. Task 4: Effectiveness of the System's Current Governance, Administration, and Programs in Fulfillment of the System's Mission

The System was managed over its first 18 years by the administrative and governance authority of the North Carolina Department of Public Instruction and the State Board of Education; each institution has had, in addition, its own responsible governance and administrative authorities. Yet, there have been changes over time in the structure of the local boards, and, more particularly, there has been the major change in system governance with the assumption of full responsibility for the System, in 1981, by the new and independent State Board of the Community College System. In particular, the following research questions may be raised:

- Does the new State Board have sufficient authority, as outlined in G.S. 115 D, to administer effectively a well-coordinated system of vocational, technical, and general education throughout the State?
- To what extent is the State Board exercising its role and authority in the governance of the system? What actions has it taken, and what are the emerging priorities of the State Board members?
- To what extent are the local boards effective in their roles? What kinds of actions are they taking, and what priorities do they perceive? Are they operating effectively as authorized by G.S. 115 D on behalf of their institutions?
- What is the appropriate division of authority between the State Board and the local boards? How do the members of each perceive the actual and ideal roles of the other?
- What is the relationship between the State Board and State President, and the local boards and institution presidents, and how does this affect System functioning? How may the State Board and State President, in particular, improve the orderliness and effectiveness of the overall governance process?

5. Task 5: Conversion of Technical Colleges to Community Colleges

Since the initiation of a two-class system,[5] in 1963, of technical institutes offering vocational, technical, and general or basic education courses, on the one hand and community colleges, on the other, offering in addition courses designed for transfer as credit toward a baccalaureate degree at four-year institutions, there has been question and controversy as to whether particular or all technical institutes (or colleges) should also offer general college transfer courses, or, in some quarters, as to whether the

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5/ Initially, three classes of institutions were recognized: technical institutes, community colleges, and industrial education centers. There have been no industrial education centers since 1968, and the statutory provision for them was repealed in 1979. Technical institutes were authorized in 1979 to change their name to technical college but without any change in function; most have elected to do so.

System should provide college transfer courses at all. The questions to be addressed through this task are:

- Has adding college transfer detracted from or enhanced the major mission to provide vocational and technical training?
- Who has designation of an institution as a community college affected enrollment in the primary program areas?
- To what extent is some liberal arts education an asset to the individual in preparing for an education?
- Does the System compete with senior institutions or does it serve a population that would otherwise go unserved?
- What would be the fiscal impact of adding the college transfer program?
- To what degree does the System's college transfer program permit more individuals to obtain a four-year degree than would otherwise be possible?
- To what extent are most institutions, through their general education offerings, in reality functioning as community colleges?

6. Task 6: Tuition Charges for College Transfer Courses

Currently, there is no distinction in tuition charges for students in college transfer, vocational, or technical courses. The basic questions addressed in this task include:

- Should tuition for college transfer courses be comparable to that charged by constituent institutions of the University of North Carolina? What would be the impact on educational opportunity and enrollment? On mission? On operational procedures required? On other institutions? On revenue?

F. Organization of the Remainder of this Report

The remainder of the report is organized as follows: first, a brief description of study procedures, sources of data, and research strategies and mechanisms is provided in Section II. This is followed (Section III) by the statement of findings in each of the six areas of inquiry. Section IV provides a summary of the findings and conclusions across the six areas, together with the associated considerations the findings prompt. Section V provides recommendations drawn from the findings for the State Board. Copies of instrumentation used have been provided separately to the Department.

II. PROCEDURES

A. General Approach

At the outset, it was recognized that the issues involved in the six basic tasks are of substantial significance, sensitivity, and complexity. They are significant, for the action taken will affect not only established institutions, their faculty and staff, and their community, local student and business enterprise constituents, but in the broader prospective, budget decisions at the state level on the one hand and the State's economy on the other. The issues are sensitive, because of the inevitability of vested interests at each of the several levels of decision-making involved: the General Assembly; the State Board, President, and Department; and the local institutional boards and presidents. The issues are complex, because actions taken (or not taken) affect a dynamic system of interrelated components, where adjustment of one component will affect others, and where concern needs to be given not only to impact of a particular decision but also to long term consequences which may outweigh immediate and more predictable impacts that may be the concerns prompting the issues.

At the same time, the very real time and cost limitations imposed on the overall study imposed procedural restrictions. Of the variety of approaches that might have been used to provide relevant evidence for the decisions to be made, we were necessarily restricted to those that could be accomplished in a relatively short time span and within the constraints of the project budget.

In response to the importance of the issues and the time and cost limitations, we attempted to recognize, first, that as a third party, the research team must be essentially concerned not with the particular unique vested interests of any one of the involved parties but with the larger elements that all parties involved must share—that is, the refinement in practice of the essential mission of the System in benefiting the State and its citizens, and in improving viable benefits within the realities of fiscal restraints.

Accordingly, in our general approach, an attempt was made to:

- Capitalize, to the maximum extent possible, on the insights and experience of those involved in the evaluation of the education and training enterprise—through assignment of educational specialists to the research team, and through recourse to the appropriate post-secondary education literature.

- Capitalize, to the maximum extent possible, on data already collected and assembled by the Department, the institutions, or other parties;
- Seek recourse, in the inquiry, to the experience and recommendations of the principal agents at each level, but in a process that demands not only preferred solutions but also the nature of the evidence those agents can present to support those solutions, and that makes a deliberate examination of the similarities and differences among the agents, toward explication of biases that may be expected to exist; and
- Verify tentative conclusions through in-depth or personal contact with the principal agents in the context in which they operate.

Within this framework, study strategies included: a search of the relevant literature; collection of relevant data of record from the Department, involving statistical, statutory and regulatory prescriptions, and special reports or position papers; intensive study of 12 institutions, involving formal site visits; solicitation, through a questionnaire directed to all institution presidents, of standard information on each institution for which data of record do not exist; and, a questionnaire survey of a sample of students, to determine their interest and utilization of system programs and services; and, personal contact with representatives of the several parties, including legislative staff, the State President, the members of the State Board, key Department staff, the institution presidents and key institutional administrators, institutional board members, current and prospective students, and representatives of business who have employees trained or in training by the System. To encourage frankness in responding, each respondent was carefully assured that no information or opinion not already a matter of public information would be identified with the particular individual or institution in any formal or informal report to the Department or to others without their specific written consent. Each of the study strategies or procedures, are briefly described in the following subsections.

B. Literature Search

An initial search using the ERIC System and other relevant computerized document services, and searching on the labels "community colleges," "associate degrees," and "technical institutes" revealed a total of 121,940 documents. These were further culled by restricting documents to those dated 1980-85, yielding 2686 documents, and by identification of documents on North

Carolina of any date (yielding 128 titles). Further search of the basic file focused on the 1980-85 period and such specific topics as staffing, enrollment, administration, governance, costs, cost effectiveness, resource allocation, organizational effectiveness, planning, mission, student characteristics, and public support yielded 322 documents. Abstracts were reviewed for all these 322 studies, and complete copies of those relevant, as well as copies of North Carolina studies with relevant titles, were procured. In addition to general studies, state system studies from California, Florida, Illinois, Maryland, and Washington were included among those procured and reviewed.

No formal summary of these documents was attempted, but the information contained was reviewed by senior project staff where relevant to their project responsibilities, together with other reports in Department or RTI general files. References are cited in the text of this report when they are directly relevant to the statements of findings or conclusions.

C. Data of Record

Data of record assembled by the research team included the following items:

- Annual Enrollment Reports, 1978-79 through 1984-85.
- Data of departmental record, from the Class Registration Reports, on the numbers of students in each of the curriculum programs (and in each of the 58 institutions) who were enrolled, in each of the years from 1978-79 through 1984-85, for one-quarter, one-half, three-quarter, or full-time credit loads.
- The basic legislation (Chapter 115 D of the North Carolina General Statutes), and the basic policy and regulations (Chapter 2, Title 23, of the North Carolina Administrative Code).
- Complete data from the Spring 1985 Departmental Survey of Staffing Needs.
- Formula Applications by Institution, for 1984-85 and 1985-86.
- Summary data on position and salaries, administrative and support staff, 1984-85 for the System, with more detailed information on the 12 institutions in the basic sample (identified in Subsection D following).
- A variety of position papers or special reports, on such topics as impact of the college transfer program on participation in higher

education, interpretations of the Spring 1985 staffing needs survey, program quality and evaluation, System mission and role of the State Board, funding issues, etc.

- Certain forms and procedures statements from the Department (e.g., instructions for the registration and class membership reports).
- A variety of institutional data of record on the 12 basic study institutions (listed in Subsection D.3 following), as well as other materials volunteered by the group of 58 institutions.
- Other recent relevant studies from other states.

Particular analyses were conducted using the statistical data contained in the enrollment reports, the formula applications by institution, and the staffing needs survey.

D. Site Visits

1. Selection of the Sample of Institutions

For intensive, on-site study as well as for serving special additional data needs, a sample of 12 institutions was designated for collection of institutional data of record, and for visits involving structured interviews and observations by research team staff.

Criteria for sample selection included: two institutions should be drawn from each of the six Trustee Districts; the 12 institutions should reflect the diversity of size in terms of FTE enrollment; the number of technical colleges or institutes versus the number of community colleges should be proportional to their representation in the system; and, from the list of institutions in each Trustee District (and classified on the other characteristics considered), institutions that senior Department staff felt were operating in exemplary and prudent ways were considered in the final sampling frame. Through this process, the following 12 basic study institutions were selected:

Beaufort County Community College
Central Carolina Technical College
Central Piedmont Community College
Cleveland Technical College
Davidson County Community College
Haywood Technical College
James Sprunt Technical College
Lenoir Community College
Rowan Technical College
Wake Technical College
Western Piedmont Community College
Wilson County Technical College

2. Site Visit Instrumentation

The site visits were structured in that particular interview targets and kinds of local information of record were pre-specified. Interview targets specified in particular were: the chief administrative officer (the president); the chief academic officer; the chief business officer; the chief student affairs officer; the registrar; and, a sample of students. Also frequently contacted, as well, were the directors of the curriculum and extension programs; the admissions officer and/or recruiter; the development officer or institutional foundation staff; and the institutional research official.

Particular questions for each kind of respondent were developed, and a summary of these questions was provided to the institution prior to the visit. From the different kinds of respondents, the questions were designed to elicit the kinds of information summarized below, with follow-up questions to determine the individual's basis for any expressions of opinion or judgment.

> Chief Administrative Officer: Institutional mission and history; priorities among different kinds of resource allocation criteria; adequacy of staffing and salary allocations; the local budget-making process; adequacies and inadequacies perceived in the allocation formulas, and local adjustments felt desirable and necessary; effect on FTE if calculated at difficult points in time, and trends in UDHC/FTE mix; perceptions of the functioning of the local board, the State Department and Board, and the General Assembly; the issues involved in conversion to community college status and in tuition for college transfer courses.
>
> Chief Academic Officer: Strengths and weaknesses, trends, and developmental priorities in educational programs; quality of instruction and staff; adequacy of staffing budget; educational support services provided; other instructional costs; enrollment trends and implications.
>
> Chief Business Officer: Role performed; areas at State and local levels where economies can be achieved; adequacy of allotments; necessary budget transfers; non-state funds.
>
> Registrar: Procedures and problems in reporting enrollment and FTE; records generated; recommendations for improvement of procedures; transfer credit arrangements; data on FTE equivalents if taken after the last day for drop-add or at the end of the quarter for the fall term, 1985.
>
> Admissions Officer: Current and prospective student markets; student characteristics; competing institutions.
>
> Institutional Research, Development, Long Range Planning Staff: Activities relevant to study issues; provision of documents.

Curriculum/Extension Heads: Program trends; program quality; staffing and budget issues; adequacy of support services; quality of instructional equipment; priorities and strategies for new program development.

3. Materials of Record Requested and Examined

Materials of institutional record were requested and, where available prior to the visit, examined beforehand; other materials were examined or collected on site. These included: the current catalog and fliers or brochures describing special course or program offerings; the current long range plan; the most recent accrediting commission report, and any relevant self-studies; any institutional studies related to the six basic study areas; annual reports of the president or senior program administrators; the most recent audit report; the current staffing chart; and names, occupations, and addresses of the local board members.

4. Conduct of the Site Visits

Visits of a full day's duration to each of the 12 basic study institutions were made, by two or three project staff, over the period from February 10 through March 3. The site visitors were well-received; most persons contacted had done their homework in terms of the basic questions transmitted ahead of the visits.

Although some campus respondents had met formally or informally to discuss strategy and responses, a healthy diversity of opinions emerged in most instances. Contrasts and similarities among the several institutions were felt to be most helpful in interpreting statements of accomplishments or needs. Even more important, however, was the variety and quality of insights and suggestions as to how successful programs are contrived, and how improvements may be effected.

5. Other Information Collected

At each of the 12 basic study institutions, group sessions were requested and held with a representative group of current students. "Focus Group" procedures, frequently used in market research, were employed. These procedures involve a structured but informal discussion session, led by a skilled moderator, to guide a group of individuals through an in-depth discussion of specific topics. Discussion topics and questions focused on their perceptions of the institution, faculty, and programs; needs for student services; costs and reaction to possible tuition increases; and values perceived in what they were getting from their education and training.

In 8 of the 12 institutions (one institution at random from the pair in each trustee district plus two others that volunteered), similar procedures were employed with a group of local business and community leaders. Attitudes were solicited in these sessions on the utility and quality of institution programs for these consumers of students; the broader role played by the institution in the community; their experience with former and current students; the importance of basic skills; the representatives' attitudes toward the college transfer program (or, if a technical institute, attitudes toward conversion); and suggestions on how the utility and effectiveness of the institution could be improved.

For the six institutions not designated to provide a group of local community and business leaders, a major feeder high school in the area was contacted to provide a group of 6 to 10 seniors interested in continuing (or likely to continue) their education in a public two-year institution. Focus group sessions were conducted with small groups of high school students in five of the six locales. Topics explored included their plans and considerations in selecting a postsecondary institution; the advantages and disadvantages in attending a public two-year institution or a four-year college or university; perceptions of the nearest public two-year institution in regard to costs, programs, transfer potential, and vocational implications; and perceptions of actual versus reasonable costs and sources of financial support.

E. Institutional Questionnaire

A formal questionnaire was directed to the presidents at all 58 institutions to obtain information not readily available in data of record at the Department and to solicit the presidents' perceptions of the several critical issues. The questionnaire, essentially open-ended in format, requested statements in the following areas: institutional mission; identification of any "special and significant" student, community, or employer constituencies served; developmental priorities with respect to programs, courses, services or special functions, staff development; new constituencies, and facilities; likely sources of support for these priorities; perceptions of the adequacy of present funding allocation procedures and formulas, in the areas reflected by specific elements in the formulas, together with evidence to support any inadequacies noted and recommendations for modifications in the funding procedures; identification of faculty and staff positions needed to run the institution, whatever its size, and identification of positions where needs are reasonably associated with the FTE or with numbers of students; local action taken to ease any inadequacies in the budget formula applications by institution; courses traditionally enrolling fewer than 22 students (the class size on which the FTE is based), and how the institution compensates for these underenrollments; priorities for assignment of a mythical 10 percent increase in the State allotment if such increase was completely unrestricted as to use; estimates of calculations of FTE equivalents if counts were taken at the end of the drop-add period or at the end of each quarter, as compared with FTEs at the 20 percent point, in the college transfer program (if applicable) other curriculum programs, extension ABE, and other extension programs; attitudes toward change in tuition and fees; and, proportions of curriculum program students continuing higher education elsewhere, together with specification of any formal or contractual agreements with senior institutions to accept transfer credit from the institution. The draft questionnaires were pretested with two institution presidents, and revised accordingly.

With assurances of confidentially for individuals and institutions, and with the option to decline or substitute a general statement for all or part of the questions, questionnaires were forwarded to the 58 institution presidents on February 13. Of this number, 54 presidents responded with relatively complete answers by the cut-off date of March 21, 1986.

F. Student Questionnaire

Brief student questionnaires were developed for use with a sample of students from the 12 basic study institutions, to obtain information relevant to one or another of the study tasks. Content included personal characteristics that might be associated with particular needs for programs or services, including reason for enrolling, current credit hour load, etc; the importance attached to the provision of particular facilities or services by the institution in some 19 areas; the availability and adequacy of needed services; and evaluation of the institution on a number of qualities (faculty accessibility and competence, costs, condition of instructional equipment, etc.)

Although the sample of students was not selected to be representative of the System as a whole (or of any or all of the 12 institutions), responses were obtained from students distributed among the various curriculum and extension programs proportional to their distribution among the System programs as a whole. Sixty questionnaires were provided to each of the 12 institutions in late February, 1986, with a request for its administration to approximately 50 students; all institutions responded, contributing a total of 756 questionnaires (156 more than requested).

G. Governance Survey

A special inquiry concerned with perceptions of role and functioning of the local and state boards was directed to the 19 current members of the State Board, the presidents of the 12 basic study institutions, and, for these 12 institutions, the local board chairman and one other voting member selected at random.

This inquiry proceeded as follows: each target recipient was provided, with a cover letter indicating later telephone interview, a list of six basic questions of concern. These were:

1. Of the actions taken by your board in the last two years, what do you consider the most important?
2. What other important roles has your board performed, formally or informally, in the last two years?
3. What, in your opinion, are the most important authorities or responsibilities of the State Board?
4. What, in your opinion, are the most important authorities or responsibilities of the institutional boards?
5. What, in your view, are the priorities for consideration or action by your board in the next twelve months?
6. Are there ways in which System governance, or the functioning of the local boards, could be improved? If so, what do you recommend?

The basic letters and questions were mailed on March 21 to the 55 governance and administrative representatives, with later telephone conversations with those that could be reached by telephone. Responses to the questions, and the follow-up discussions, were used to obtain the information required by the broader questions guiding this task (see Section I.D.4). In a few instances, written response was provided.

H. Other Personal Contacts

In addition to the contacts made in the site visits and governance surveys, formal or informal contacts, in person or by telephone, were made with many others over the six month course of the inquiry. Several meetings were held with State President Scott and his senior staff, in particular the Executive Vice President, the Vice President for Finance, and the Vice President for Planning and Research. Several meetings involved Ms. Charlotte Ashcraft of the Fiscal Research Division of the Legislature. Contact was also made with Dr. Dallas Herring, the chairman of the responsible board at the time the System was established, and with others who had conducted studies of the System or who had been a part of its history in some significant way. These contacts were used to acquaint the study team with the variety of insights into the aspects of concern, and to provide a context for evaluating the responses of other parties involved in the provision of factual information, opinion, and judgment.

I. Utilization of Information Collected

Most of the information collection strategies cut across more than one of these several research tasks. Accordingly, research instruments or data sources and analysis procedures applicable to each task will be specifically identified in the statement of findings in the next section.

J. Limitations

The procedures used imply certain limitations that should be made explicit at this point in this report of findings.

Each of the questions raised by the General Assembly could have been more rigorously addressed by other means. For example, Task 1, concerned with proper staffing patterns, requires for definitive answers a series of job analyses that would determine, for noninstructional staff, the responsibilities carried and the tasks performed, against an appropriate criterion of adequacy of performance in meeting the needs. Task 2, concerned among other things with the point in the quarter where the FTE is taken, would seem best addressed by institutional records assigning contact hours to students enrolled at particular points, such as end of drop/add period or end of term, and summation of these alternate FTE enrollments for the System.

The study team had to face realities of schedule and project budget, as well as current capabilities of and burden on the institutions and department. The project schedule allowed only about four months for project planning and data collection; many desirable activities--e.g., a series of job analyses of 20 or 30 key positions and the necessary job evaluations in diverse institutions--were not possible within the available time and budget. The enrollment records at the close of registration--at the Department and at most of the individual institutions--were found insufficiently reliable as well as incomplete (because of the omission of contact hour specification) for applying them to a determination of class membership hours at that point, a purpose with requirements for a kind of precision not built into their assembly, and too time-consuming for the institutions to bring up to audit quality.

In short: a definitive study of the 6 basic issues would have required a period of at least 12 months, and larger resources than available under the prescribed budget for the study.

Accordingly in an attempt to gather relevant and useful information, recourse was made frequently to estimates and judgments of those involved in the System. Although our alternate procedures had built-in provisions to detect and evaluate the biases that can infect soft data, and although there has been care in specifying the nature of the evidence used in reaching conclusions, we are nevertheless confronted with substantial issues but necessarily limited strategies. All findings are consequently tentative, and subject to verification by more detailed study and/or experience over longer periods of time.

III. FINDINGS

A. Staffing

1. Overview

The legislative charge to the study in regard to staffing is to determine "proper staffing patterns for institutions within the Community College System with special emphasis on the implications for base and formula allotments." The time constraints of the study precluded either collection of detailed information of job classifications and duties, or conformance of these specifications to actual tasks performed at the institutions. We focused instead on current staffing patterns and variations among the institutions, and our perceptions as to their adequacy.

The attention of the research team was accordingly directed to an examination of secondary data from the Department of Community College records for information on current staffing patterns, and their relation to institutional characteristics such as enrollment size, and change in enrollment over time. In addition, data on staffing patterns, and institutional concerns related to aspects of staffing were analysed from the site visits, as well as from the responses to the institutional survey of the 58 institutions conducted during the study. In particular, detailed responses from the twelve institutions in the study sample were examined for empirical evidence of the degree to which positions, salaries, and other costs provided by the current allotment formulas are perceived as adequate. Finally, the results of an institutional survey of staffing needs, conducted by the Department in the Spring of 1985, were reviewed and analyzed in more detail to provide additional insights into these issues.

This section presents the results of our analyses as follows. First, current staffing patterns across all institutions within the System are presented, and compared for size of institution, and by aggregate and detailed position categories. Second, factors associated with variability in staffing patterns across institutions are discussed. Relationships with enrollment trends, budget FTE/UDHC mix, and other institutional characteristics are examined, with emphasis on non-instructional staffing needs as reported in results of earlier research. Third, the adequacy of current formula allotments to staffing is examined in light of institutional goals and requirements.

2. Current staffing

Staffing data for the System and for each institution were obtained from printouts of the staff information files maintained and updated on the basis of information received by the Department of Community Colleges on Form DCC 7-8. Data on part-time instructional or other staff are not included in these tabulations and were not collected for the study. The Department of Community Colleges obtains annual part-time staff counts from the institutions each October, which provide a "snapshot" at that point in the Fiscal Year. Unlike the practice for full-time staff, however, hiring of part-time instructional staff fluctuates significantly throughout the year, and there is no State or federal requirement for reporting summary intra-year data. To assemble such information would place a substantial burden on the institutions.

For Fiscal Year 1984-85, the total number of full-time instructional faculty and administrative and support staff employed for nine months or more at all institutions was 7630. Table 2 illustrates the staffing pattern for the fourteen staff categories used for reporting purposes by the Department of Community Colleges. Table 2 also presents the proportional distribution of total full-time employment across these staff categories. The final column presents state-wide averages, which is the hypothetical employment by staff category at the "typical" institution.

Detailed data for individual institutions indicate that the institutions vary considerably in terms of staff size, as well as in individual staffing patterns by institution. Total FY 1984-85 full-time employment ranges from 32 at the smallest institution to 455 at the largest. The numbers of security personnel, for example, range from eleven full-time personnel on one of the larger campuses, to zero on forty-two other campuses. Twenty-one institutions (36%) have total full-time employment of 100 or less, the majority, 33 (57%), employ between 100 and 200 full-time personnel, and four institutions have full-time employment of more than 200.

The staffing pattern for the System in Table 2 illustrates that, on the average, the bulk of full-time institutional staffing (31%) is in 11-12 month Curriculum Instructional positions. However Table 2 also shows that support staff, composed of Instructional/Administrative Support and Secretarial/Clerical categories, together make up approximately the same proportion of full-time staff.

Table 2

Systemwide Staffing Pattern and System Average FY 1984-85 by Staff Category

Staff Category	Employment FY84-85	Proportion of Total	Statewide Average
President	57	0.007	1
Vice President/Dean/ Director/Business	600	0.079	10
Curriculum Instructor 9-10 months employment	795	0.104	14
Curriculum Instructor 11-12 months employment	2361	0.309	41
Instructional Assistants/Aides	100	0.013	2
Extension Instructor	215	0.028	4
Learning Lab Coordinator	117	0.015	2
Instructional/ Administrative Support	1178	0.154	20
Visiting Artist	51	0.007	1
Secretarial/Clerical	1268	0.166	22
Bookkeeper	122	0.016	2
Skilled Craftsmen	260	0.034	4
Service/Maintenance	459	0.060	8
Security	47	0.006	1
Total	7630	1.000	132

From the summary statistics and overview provided in Table 2 it is possible to obtain only a general picture of staffing distributions within the System. There is as already noted considerable diversity and complexity in individual position allocations among the 58 institutions. Table 3 summarizes the variability across the 58 institutions for each staffing category. Total full-time employment for FY 1984-85 is presented for each staffing category, with institutional maximums, minimums, averages, and standard deviations. The greatest institutional variations are in the Curriculum Instructional categories, specifically in College Transfer and Technical, and in the Instructional/Administrative Support and Secretarial/ Clerical positions.

Table 4 further illustrates the institutional variability across the aggregate staffing categories for the twelve sample institutions in the study. The ratio, for example, of Instructional Administrative Support staff to total full-time staff ranges from 14/145 (0.096) for Central Carolina to 31/119 (0.261) for Western Piedmont, as compared with the System average of 0.154 from Table 2. Secretarial/Clerical full-time employment varies from 11/104 (0.106 of total) for Haywood, to 99/455 (0.218) for Central Piedmont, compared with a Systemwide average ratio of 0.17. The ratio of full-time curriculum instructional staff to total full-time employment ranges from a high of 72/147 (0.490) at Davidson to a low of 33/119 (0.277) at Western Piedmont compared with the Systemwide average ratio of 0.41. Additional differences in institutional distributions of instructional staff are illustrated for example in the numbers employed 9-10 months as compared to 11-12 month employees. While 11-12 month employees predominate in most institutions in the sample, two institutions (Davidson and Lenoir) have approximately equal numbers of 9-10 month staff, and in one case (Western Piedmont) almost all full-time curriculum instructors are on a 9-10 month basis.

The diversity in staffing reflects the necessary variations under local autonomy that local institutions make in responding to their perceptions of staffing labor markets and regional needs. It should be noted that the numbers of staff in the various detailed staff categories at each institution as a proportion of total staff at that institution vary considerably, reflecting differences in programs, management style, enrollment mix, local needs, etc. Yet, the capabilty of the institutions to work out, under local autonomy, unique solutions to fit local situations as well as needs, has been a cornerstone of the strength of the North Carolina System.

Table 3

Variations in Staffing Patterns Across All Institutions 1984-85

	1 PRES	2 VP/DIR/DN /BUS MGR	3 CURR INSTR C TR	4 GEN ED	5 TECH	6 VOC	7 INSTR ASSTS AIDES	8 XT AC	9 XT AB	10 XT AHS	11 XT JTPA	12 XT VA
TOTAL EMP	57	600	505	231	1630	790	100	30	33	26	17	52
MAXIMUM	1	23	80	51	88	34	9	6	8	5	3	2
MINIMUM	0	4	0	0	4	1	0	0	0	0	0	0
RANGE	1	19	80	51	84	33	9	6	8	5	3	2
MEAN	1.00	10.34	8.71	3.98	28.10	13.62	1.72	0.52	0.57	0.45	0.29	0.90
ST DEV	N.A.	4.06	14.43	7.55	21.05	6.58	2.17	1.12	1.25	0.99	0.64	0.44

NOTE: The 24 staffing categories abbreviated at the head of each column are as follows:

1. President
2. Vice President/Director/Dean/Business Manager
3. Curriculum Instructors, College Transfer
4. " General Education
5. " Technical
6. " Vocational
7. Instructional Assistants/Aides
8. Extension Instructors, Academic
9. " Adult Basic
10. " Adult High School
11. " Job Training Partnership Act
12. " Visiting Artist
13. " Human Resource Development
14. " New and Expanding Industry
15. " Occupational
16. " Avocational
17. " Compensatory Education
18. Learning Lab Coordinator
19. Instructional Administrative Support: (this category includes positions such as administrative assistants, librarians and assistants, data processing and institutional research personnel, as well as counselors, financial aid, placement and student activities directors; for the detailed listing of all of these positions, see Appendix (-)
20. Secretarial/Clerical
21. Bookkeeper
22. Skilled Crafts
23. Service/Maintenance, and
24. Security.

Table 3 (continued)

	13 XT HRD	14 XT NI	15 XT OCC	16 XT AVOC	17 XT CE	18 LLC	19 IA SUPP	20 SEC/CLER	21 BKKPR SK	22 CRFTS	23 SERV/MTN	24 SECURITY	25 TOTAL
TOTAL EMP	64	7	35	1	0	117	1179	1268	122	260	459	47	7630
MAXIMUM	4	3	6	1	0	5	74	99	8	18	51	11	455
MINIMUM	0	0	0	0	0	0	3	4	0	0	1	0	32
RANGE	4	3	6	1	0	5	71	95	8	18	50	11	423
MEAN	1.10	0.12	0.60	0.02	0.00	2.02	20.33	21.86	2.10	4.48	7.91	0.81	131.55
ST DEV	1.16	0.49	1.29	0.13	0.00	1.41	12.24	16.15	1.45	3.59	7.09	1.87	76.14

Table 4
Staffing by Aggregate Category for Twelve Sample Institutions, and Systemwide Averages

STAFF	SYSTEM AVERAGE	SAMPLE INSTITUTIONS BEAUFORT	CEN CAR	CEN PIED	CLEVELD	DAVIDSON	HAYWOOD	J SPRUNT	LENOIR	ROWAN	WAKE T	W PIEDMT
President	1	1	1	1	1	1	1	1	1	1	1	1
VP/Dean Director/ Bus. Mgr.	10	7	12	14	11	9	6	10	16	12	15	14
Curr. Ins 9-10 m.	14	8	13	25	0	33	4	10	30	4	16	32
Curr. Ins 11-12 m.	41	32	53	192	53	39	43	31	38	47	100	1
Instr. As Aides	2	1	2	9	1	4	5	0	4	2	1	2
Ext. Inst	4	0	8	3	5	0	4	3	4	4	4	2
LLC	2	1	1	5	1	2	1	0	2	1	5	4
Instr/Adm Support	20	13	14	74	13	22	12	14	24	15	29	31
Visiting Artist	1	1	0	0	1	1	1	1	0	1	1	1
Sec/Cler	22	17	27	99	14	20	11	14	26	16	42	17
Bookkpr	2	2	1	8	2	2	1	2	4	1	2	2
Skilled Crafts	4	3	3	18	4	10	6	2	5	2	13	6
Service/ Maint.	8	11	10	5	8	3	9	7	12	2	18	6
Security	1	0	0	2	1	1	0	0	2	0	0	0
Total	132	97	145	455	115	147	104	95	168	108	247	119

To accommodate these differences in subsequent analyses using data from all 58 institutions where possible, detailed staffing information on positions by institution were aggregated into four general staffing categories shown in Table 5. These four general categories were derived from collapsing the 24 specific catgories in Table 3 as shown in the table.

In further examinations of differences in staffing across institutions of varying enrollment levels, institutions were also grouped into the clusters used by the Department in their 1985 survey of non-instructional staffing needs as shown in Table 6. These classifications facilitated analysis of differences in staffing patterns as a function of various system and institutional characteristics while controlling in some way for size of institution. In addition, use of these size categories permitted direct comparison of institutional non-instructional staffing needs as a function of other institutional characteristics.

These aggregate staffing and size categories were used to summarize the staffing patterns of all 58 institutions, as depicted in Table 7. When aggregated this way, the data show some general homogeneity across institutions in the four broad staff categories. Row proportions in the table indicate the relative distribution of employment in each staff category for the institutions in each size group. As expected, the proportion of senior administrators (Staff Category I) decreases linearly as a function of increase in institutional size. The other three staff categories are not as consistent, but vary not more than 12 percent across size groups in any one staff category. The ranges therefore for broad staffing categories based on the current system configuration in place are as follows:

Senior Administrative Staff: 7 to 15 percent of total employment.*

Instructional Staff: 39 to 51 percent of total employment.*

Instructional and Administrative Support Staff: 27 to 34 percent of total employment.*

Secretarial/Clerical Staff: 14 to 20 percent of total employment.*

3. Factors Associated with Variability in Staffing Patterns

Extensive analyses were conducted on relationships between enrollment size, institutional characteristics, and indices of full-time staff

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* Full time only.

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Table 5

Description of the Four General or Aggregate Staffing Categories Used in the Analyses

Aggregate Category	Detailed Position: Column Number from Table 3
Category I Senior Administrator	1,2
Category II Instructional Staff	3,4,5,6,8,9,10,11,12,13,14,15,16,17
Category III Instructional Adminsitrative Support	7,18,19,21,22,23,24
Category IV Secretarial/Clerical	20

Table 6

Institutional Clusters by Size

Group/Size 1983/84 FTE	Institutions
GROUP 1 0-999	Bladen, Martin, McDowell, Montgomery, Pamlico, Tri-County
GROUP 2 1000-1499	Anson, Beaufort, Carteret, Halifax, James Sprunt, Nash, Piedmont, Richmond, Roanoke-Chowan, Sampson
GROUP 3 1500-1999	Blue Ridge, Cleveland, College of the Albemarle, Craven, Edgecombe, Haywood, Isothermal, Mayland, Mitchell, Randolph, Rockingham, Southwestern, Stanly, Vance-Granville, Wilson
GROUP 4 2000-2499	Caldwell, Coastal Carolina, Robeson, Sandhills, Southeastern, Surry, TC of Alamance, Western Piedmont, Wilkes
GROUP 5 2500-2999	Asheville-Buncombe, Catawba, Davidson, Gaston, Johnston, Lenoir, Pitt, Rowan, Wayne
GROUP 6 3000 UP	Central Carolina, Durham, Forsyth, Wake, Cape Fear, Guilford, Central Piedmont, Fayetteville

Table 7

Numbers and Proportions of Staff by Aggregate Position Categories, for Institutions Grouped by Size

Institution Size Group	Staff Category I Senior Admin	Row Prop	Staff Category II Instructors	Row Prop	Staff Category III Admin and Inst Support	Row Prop	Staff Category IV Secretarial/ Clerical	Row Prop	Total Employment	Total Row Prop
Group1 (0-999 FTE)	45	0.15	127	0.42	86	0.28	48	0.16	306	1.00
Group2 (1000-1499 FTE)	96	0.10	359	0.39	311	0.34	160	0.17	926	1.00
Group3 (1500-1999 FTE)	161	0.10	687	0.43	493	0.31	246	0.16	1587	1.00
Group4 (2000-2499 FTE)	104	0.08	565	0.44	410	0.32	197	0.15	1276	1.00
Group5 (2500-2999 FTE)	108	0.08	722	0.51	389	0.27	204	0.14	1423	1.00
Group6 (FTE ≤ 3000)	143	0.07	961	0.46	595	0.28	413	0.20	2112	1.00
All Institutions	657	0.09	3421	0.45	2284	0.30	1268	0.17	7630	1.00

requirements. Institutions were grouped by size (as shown in Table 6), and relationships were examined between such independent variables as institutional status, year of most recent status change, changes over the last five years in various measures of enrollment by budget FTE and UDHC, and current enrollment and a number of dependent measures of staffing patterns and needs. The data from the earlier Department survey of non-instructional staffing needs provided an important source of data on recent staffing requirements in the clerical and administrative support areas, and we found these data helpful and germane to the present study.

Few simple or unambiguous relationships emerged, suggesting that local autonomy has led to a variety of relatively unique institutional staffing arrangements in response to local needs. Table 8 provides a summary of the earlier staffing survey data, illustrating means by institutional size groupings. The first column presents the six size groups used in the earlier survey, based on budget FTE for 1983-84. The remaining columns contain averages, for each size group, of numbers employed in non-instructional positions, numbers of additional positions needed, and the percentage increases of needed additional to employed staff.

As might be expected, the average numbers of non-instructional staff actually employed in 1985, as well as the numbers stated as needed, increased linearly with size of institution. However, the percent increase (total needed over currently employed), does not increase in similar fashion, and is actually largest in the smallest institutions.

In view of the documented concern both in institutions and in the Department regarding the problem of non-instructional staff needs, analyses were conducted in the present study which related the data summarized above to data on the changes in student populations, in terms of both FTE and UDHC.

Changes in FTE and UDHC, along with other institutional characteristics, were used as independent variables in regression analyses to explore relationships between quantitative institutional measures and various indices of staffing patterns and needs. Institutions were classified as "all," "smaller" or "larger." "All" institutions are defined as a group slightly less than the universe (N=55; one institution from each of Groups 1 through 3 was dropped due to missing data). Smaller institutions are defined as Groups 1, 2, and 3 with 1983-84 FTE less than 2000, and larger institutions the remainder with

Table 8

Summary of Staff Needs Survey Data by Institutional Size Group

Institution Size	Average Total Noninstructional Staff	Average Positions Needed	% Needed/ Employed
GROUP1 0 - 999FTE (N=5)	27.15	35.7	131.49
GROUP2 1000-1499 (N=10)	39.55	50.5	127.68
GROUP3 1500-1999 (N=14)	46.5	58.57	125.95
GROUP4 2000-2499 (N=9)	58.27	69.06	118.51
GROUP5 2500-2999 (N=9)	59.51	72.63	122.04
GROUP6 >3000 (N=8)	117.95	141.97	120.36

Source: Department of Community Colleges survey of nonstructional staffing needs, Spring 1985.

FTE greater than 2000. It is recognized that such a categorization masks much of the uniqueness of the institutional characteristics being examined, particularly among the larger institutions. Several considerations, however, support this grouping arrangement. The greater number of observations in two, rather than three groups yielded more reliable statistical properties for the regression equations. Furthermore, analyses were also performed with a separate, middle-sized grouping, yielding little difference in results from those presented here. Finally, according to the Department's report/survey results, use of the middle-sized grouping of institutions produced results that were difficult to interpret.

The results of regression analyses were in almost all cases inconclusive. Institutional status, defined as either community college or technical institute/college, appeared to have little relationship with either the results of the non-instructional support staff needs survey, or with current staffing patterns. Another measure of institutional status, the year of most recent status change, was selected as an index of longevity of status. There was little relationship between this measure and the needs for support staff as expressed in the survey, but a noticeable curvilinear association in relation to current instructional/administrative support staffing patterns, particularly in smaller institutions, was found.

In view of the considerable changes that have taken place recently in enrollments, and the indications in the questionnaires and site visits of needs for additional support staff, changes in both FTE and UDHC were analysed for their associations with staff needs. The dependent variables in both cases were results of the Department survey of non-instructional staffing needs, and were represented by the absolute number of staff positions indicated as needed, and the percent increase over current staffing complements. The independent variables were constructed from institutional differences in FTE and UDHC enrollment data for the two time periods 1978-79 and 1984-85. The relationships were not particularly strong, but appeared somewhat more marked again for smaller institutions in terms of numbers of support staff needed.

In an attempt to determine relationships between current enrollment and current staffing patterns, both extension and curriculum enrollment (FTE and UDHC) were examined for their association with numbers of staff in each of the four staffing groups. Table 9 presents the results of these analyses.

Table 9

Associations (r^2) Between Selected Enrollment Variables and Staffing Patterns

Independent Variables	Dependent Variables		r2	
		all	smaller	larger
			institutions	
Total FTE 1984-5	GP I	0.453**	0.290**	0.329**
	GP II	0.857**	0.401**	0.801**
	GP III	0.768**	0.498**	0.692**
	GP IV	0.89**	0.261**	0.906**
Extension FTE 1984-5	GP I	0.497**	0.285**	0.417**
	GP II	0.343**	0.071	0.161*
	GP III	0.362**	0.146*	0.202*
	GP IV	0.432**	0.091	0.305**
Curriculum FTE 1984-5	GP I	0.282**	0.132	0.145**
	GP II	0.88**	0.592**	0.851**
	GP III	0.743**	0.544**	0.666**
	GP IV	0.856**	0.298**	0.834**
Total UDHC 1984-5	GP I	0.399**	0.121	0.285**
	GP II	0.852**	0.266**	0.818**
	GP III	0.736**	0.390**	0.654**
	GP IV	0.856**	0.278**	0.847**
Extension UDHC 1984-5	GP I	0.462**	0.115	0.375**
	GP II	0.709**	0.181*	0.588**
	GP III	0.611**	0.266**	0.474**
	GP IV	0.657**	0.234**	0.563**
Curriculum UDHC 1984-5	GP I	0.193**	0.067	0.097
	GP II	0.688**	0.319**	0.655**
	GP III	0.595**	0.464**	0.520**
	GP IV	0.762**	0.216*	0.730**

NOTE: The statistic "r2" is the coefficient of determination, and represents the proportion of total variability in the dependent variable accounted for by the regression model.

* F test significant at the $p < .05$ level.
** F test significant at the $p < .01$ level.

The data indicate that Group I (Senior Administrative Staff) is least sensitive overall to enrollment patterns across institutions. It is not clear whether this reflects the current funding base allotment for administrators, or is an endorsement of the concept of a basic core of needed institutional administration. Total FTE is clearly related to Groups II (Instructional Staff), III (Instructional and Administrative Support), and IV (Secretarial/ Clerical) staffing patterns, but particularly in the larger institutions. Extension FTE appears not to be as closely associated with current staffing patterns. The data suggest however that curriculum FTE drives current staffing patterns, especially instructional staff. Curriculum FTE is also closely related to secretarial support staff in larger institutions, though much less in smaller ones.

4. Adequacy of current formula allotments for staffing

A primary source for information about the adequacy of the present method of allocating State dollars to the local institutions is our analysis of responses to the institutional questionnaire. The results of site visits to the twelve sample institutions provided additional information. In this section of the report are identified the major concerns with current State funding mechanisms as they relate to institutional staffing, and the areas in which there appears to be some consensus of opinion across institutional groups (e.g. smaller, larger, or all).

As judged by the results of answers to questions regarding State funding allocations and procedures, there is a strong indication of widespread concern about the adequacy of the present funding allocation procedures, both in providing for faculty salaries in both curriculum and extension positions and in numbers of positions allocated for instructional and administrative support. At least 90% of the institutions responding to the questionnaire indicated inadequacies in formula allocations with regard to curriculum and extension faculty salaries as well as administrative salaries.

Several issues were raised in both written and oral responses to study questions. They revolve primarily around the central concern of how to preserve institutional quality of instructional as well as administrative support services under the dual constraints of budgetary limitations and competitive market forces. In the discussion on institutional staffing concerns that follows, institutional responses are quoted verbatim where possible to present directly the perception behind the concern.

The current (1985-86) operating formula computation allots all instructional positions to institutions at the rate of one position per 22 FTE. Each curriculum or ABE extension instructional unit is funded at a unit base salary amount of $27,770. Other extension faculty units are funded at a unit base salary amount of $10,202 each. Differences in the employee benefits and associated "other costs" structure of the allotment to "other extension" faculty however further compound this disparity to where the "other extension" position represents $12,136 in total allotment per unit, or 34% of the $35,696 total allotment for the curriculum or ABE extension position.

One element in the allocation formula is the amount of FTEs per full-time instructional position, and the other is the unit budget amount per position. Respondents indicated concerns with both elements of this funding structure. The mandated funding ratio of 22:1 FTE/ faculty , while considered appropriate for some more traditional classroom settings, is felt to discriminate against technical instructional situations requiring more intense faculty/student interactions or supervision. In health curricula in particular, and in providing instruction to the mentally retarded for example, licensing and accreditation specifications may indicate student/faculty ratios of as low as 8:1 or 6:1. In practice, therefore, as one respondent noted, "the current formula does not recognize the ratio necessary for safe and high quality instruction in vocational/technical programs." It is also perceived that smaller institutions in rural areas with necessarily smaller classes may be at a disadvantage under the present formula because of their inability to generate the FTEs per instructor that larger institutions can.

Salaries, particularly for curriculum positions where greater dependency is placed on full-time faculty, are perceived as the "most critical inadequacy" in the current system. Certain substantive areas were emphasized, such as health and engineering technologies, but the problem is perceived as extensive and serious. Some respondents identified "nationwide" competition for personnel: "we continue to lose top flight faculty to neighboring states." The linkage between business and industry and the technical and community colleges essential to effective instruction is also a double-edged sword in that faculty with experience in, and the closest ties to, the private sector are most aware of the comparisons between their own salary levels and those for positions with similar responsibilites in industry. "Salaries [are] competitive [neither] with business and industry for the limited supply of qualified people, [nor] with instructors in the North Carolina University system teaching the first two years of baccalaureate work." Fifty-one of the 54 institutions responding to a question on the institutional questionnaire as to how a hypothetical unrestricted 10 percent increase in allotment would be invested indicated they would raise instructional salaries if they could, representing the highest degree of consensus among respondents to any of the faculty/staff categories enumerated in that question. There is a clear perception that successfully meeting the demands both of students as well as business and industry requires well-trained, experienced, and competitive faculty. "Our most important priority is to bring the quality of our instructional program up to a level that we can be genuinely proud of."

Of particular note is our observation that the current curriculum faculty per-position allotment of $27,770 is $4,590 more than the $23,180 that we calculated as the weighted (to reflect actual proportions of 9 and 11 month positions) mean salary statewide paid to full-time curriculum instructors. Data from the Department of Community Colleges suggest that, over the last three years (1982-83, 1983-84, and 1984-85), funding transfers have occurred in increasing amounts from instructional to administrative line items.

It should also be noted that although comparison of community college salaries in North Carolina with national data is hazardous because of differences in faculty ranking systems, varying nonrespondents for national surveys, and other factors, our examination of recent national data from several sources suggests that North Carolina is somewhere within the bottom 40 percent of national distributions for faculty salaries.

The formula salary level for "other extension" faculty is considered "extremely" or "grossly" inadequate by several respondents. According to our information from the State Department, this figure ($10,202) should not be interpreted as a salary level at all, but a costing unit which is substantially lower than that for curriculum faculty to reflect the number of part-time faculty teaching "other extension" courses. The reality is, however, that the figure is interpreted differently at State and local levels. One respondent noted: "$10,202 works out at $4.90 per hour. Just where does anyone think I can hire an occupational extension teacher for that?" In addition, there is a considerable discrepancy between the unit salary allotment for other extension faculty ($10,202) and the statewide average salary paid to full-time extension faculty in 1984-85 of $18,887.

One consequence of these perceived inequities noted by many respondents is "too heavy reliance on part-time staff." This is seen as a direct result of budgetary constraints; "the system forces an almost total reliance on part-time instructors." In one of the larger institutions in the state, 38% of all courses in the recent fall quarter were taught by part-time faculty. In particular, " Adult High School/Pre-GED and Occupational Extension FTE are inadequately funded to provide quality instruction. Present funding levels ...force the institution to rely exclusively on part-time faculty. Students in these areas need the best possible instruction because of bad experiences with secondary education. It should be noted also that the subject matter taught in these programs is at the same level as the remedial programs now funded as curriculum. This funding difference must be eliminated."

While it was emphasized by some respondents that part-time teachers represent an interim solution since they are the only ones "willing to work for that wage rate", higher administrative costs may result. "The difference between the actual costs of a curriculum class and an extension class is in savings gained by employing part-time people. However, part-time [faculty] increase administrative costs thus consuming those savings." Problems can also arise when full-time faculty teach extension courses. "When a full-time instructor teaches an extension course, 60% of that instructor's salary is lost." Phrased differently, "with extension funded at $0.68 per membership hour, and curriculum funded at $1.81 per membership hour, the curriculum instructor has to take a pay cut when teaching that extension course." A potential compromise is seen as greater use of volunteer staff, particularly if current restrictions on generation of FTEs by volunteer faculty were eased.

Beyond the concerns about complete reliance on part-time faculty lies a deeper issue. In the site visits to the 12 basic study institutions, institutional representatives--presidents as well as extension program directors--were particularly vocal about the continually shrinking values of instructional allotments assigned to extension FTEs as opposed to curriculum FTEs. While most had been able to secure excellent part-time faculty in terms of the $5 to $13 per class contact hour paid, and while there were many examples of these individuals contributing time with students out of class, it was clear that the funding formula was acting as a disincentive system for offering these courses at all. Two deleterious effects were noted. First, occupational extension is where training for particular industry needs, or for upgrading job skills, is frequently most appropriate; the institutions felt outreach in this important community development regard was unduly and increasingly restricted. Second: the other extension courses such as practical and avocational skills were frequently seen as important in community support: "These students are the ones who really get behind our community bond drives and make them effective." While concerns in Raleigh with cake decorating and poodle clipping courses were almost always recognized early in the conversations, there were strong advocates for quality of leisure as an aspect of quality of life. These courses serve a more powerful constituent in many instances in terms of the larger community support, and were felt to serve genuine needs not inconsistent with mission in terms of community service.

The issue of funding for administrative and instructional support is seen as related to faculty salaries, since, as noted earlier, instructional position dollars are currently used to employ support and clerical staff. "Under the existing formula [we are] caught in a real no-win situation. In order to provide the necessary support services, we must use instructional position funds... a classic example of robbing Peter to pay Paul." The resulting curricular problem is perceived as that of insufficient administrative/clerical support dependent upon cutting into already low and non-competitive faculty salaries. "We have simply taken dollars away from faculty salaries because we have had no other choice."

As already indicated in the results of the Departmental survey in the Spring of 1985, the number of administrative support and clerical positions is perceived, in almost all institutions, to be insufficient in some way. The Department's report of the survey also concludes that the formula did not appear to generate a comparable number of positions relative to the number of individuals actually hired in these categories, and indicated the need to look further at this shortfall as well as at budget transfers as an institutional response.

Our data from site visits and institutional questionnaires tend to corroborate these earlier survey findings, but present additional information. Those positions most associated with fluctuations in UDHC by respondents were counseling, administrative and registration staff. In a question designed to identify needs for new or emerging staff positions, institutions mentioned most often the positions involved in marketing and public information. A respondent noted: "The formula allocation is well below actual instructional requirements for needed support staff, and consequently actual salaries must be below the formula allocation in order to fund the actual positions." An alternative, of course, is that the local institutions may subsidize these positions from other resources. An institution reported, for example: "In 1985-86 the formula provides $13,567 per clerical position earned on the basis of 0.6 position per 100 FTE. This practice ignores the fact that some institutions can employ 1.5 clerical personnel for that amount, while in urban areas with heavy concentrations of business, the competitive wage for clerical personnel is considerably higher. In these areas, $13,567 will not even employ one person. [We] had to subsidize each clerical position 8.22% in 1985-86." The need for more clerical personnel was associated by one respondent with the burden of federal and other administrative reporting requirements, but is also perceived as a function of the increase in the number of part-time students.

The present operating formula provides a base allotment of 10.9 instructional support and administrative positions regardless of institutional size. That the operating formula may benefit the smaller institutions can be determined by examination of 1985-86 allotments to all 58 institutions. The data indicate that in 21 (or 38%) of the institutions the base allotment for 10.9 positions constitutes 30% or more of the total administrative allotment, and in four cases more than 50%. In the case of the larger institutions, however, the base allotment represents much less, in one case only 7% of the total administrative allotment.

Associated with inadequate salary levels in the allocation system are related concerns about the lack of funds for staff development. Ten out of twelve of our basic study sample institutions mentioned the need for increased resources for staff development in their budgets, and many suggested explicit recognition of these costs in the state formula. Operational definitions of staff development costs included, for example, short sabbaticals or paid leaves "that might include opportunities to return to work in industry or business to learn the state-of-the-art," to "help instructors update their skills," or to provide travel costs for professional meetings. These needs "cannot be met" through the present budgetary allotment system, despite the assignment to each institution of "other costs" monies, since all sources combined are not perceived as adequate to meet faculty salaries.

5. A Concluding Observation

Although it is not surprising that the presidents and senior administrative staff felt that funds were inadequate, we believe for several reasons that the institutions are operating under substantial budget stringencies. First, and most obvious, is the unanimity, vigor, and sincerity with which the unmet needs are described. Although comparison of North Carolina mean salaries against the results of various national surveys is hazardous, and produces conflicting statements of the North Carolina position, a second reason is the low ranking of average salaries in North Carolina among those in other state systems, and the general austerities noted in the visits. Third, and most important, are the kinds of compromises that we found have to be made under local options. As one responsible but troubled president put it: "I'm constantly faced with a moral dilemma: for example, I can support an occupational extension course by reclassifying it as curriculum, which is dishonest; or, I can fail to offer it when it is desperately needed, which is irresponsible." The compromises that we found were, for the most part, not dishonest, but were compromises that detracted from the quality of the work offered. Examples include: combining college transfer introductory English sections to yield classes generating 100 FTEs to cover shortfalls in instructional budgets elsewhere, when "our kinds of students need smaller classes;" deferring instructional equipment purchase or maintenance to accommodate the required Prime administrative data system; focusing on programs that generate high FTEs simply as a support venture; replacing full-time faculty, though desirable, with part-time faculty as noted; imposing over-loads on faculty and administrators; continual deferring of such priorities as staff development; or failing to develop a needed new program because of development time required. There is a folklore that holds that there is too much dishonesty and attempts to "beat the system;" we found few such solutions. But we did find a large number of good men and women with uneasy consciences and deep frustration because the compromises that had to be made diminished quality, restricted offerings, prevented needed updating, or failed to provide adequate compensation for staff. These are signals that should be respected and examined carefully.

It should be noted that current staffing patterns (and, for that matter, program offerings) in North Carolina and elsewhere are inevitably the result not only of mission and market forces, but also of elements built into the system for allocation of funds. Brenneman and Nelson stated the matter succinctly in 1981 as follows:

> Legislators often overlook the fact that a budgetary formula is also an incentive system, a set of prices that will be paid for rendering particular services. For example, formulas that reward enrollment increases with payments based on average rather than marginal costs will give rise to extensive recruiting efforts, since the colleges may make money on additional enrollments. States that do not differentiate their payments according to program cost differences, paying instead a fixed sum per student regardless of program, have set in place (perhaps unintentionally) powerful incentives for a college to concentrate on low-cost programs. And, where a state seeks to pay for some courses of study and not for others, it should not be surprised when colleges redefine courses into the favored categories.[6]

If the logic of this statement is not seriously flawed, we must assume that under allowable options the institutions are placed in a position where good management has to be a process of finding "legitimate" (e.g., allowable) ways to support the costs found necessary. To the degree that funding is stringent, and to the degree that corrective regulations to prevent circumvention of unintended consequences of the basic incentive system are not in place (and such regulations always become a source of friction where funding is stringent), there will be deviations in staffing, from institution to institution, in terms of how capable the local management may be in both utilizing the allocation system to increase revenue, and in redistributing that revenue to meet local needs effectively. And, although there are necessarily variations in management capability, we believe that by and large the local autonomy has permitted a high quality of service to the communities and state. More adequate funding and workable restrictions against abuse, not simple regulatory solutions, are needed.

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[6] Breneman, D. W., and Nelson, Susan C. Financing Community Colleges: An Economic Perspective. Washington, DC: The Brookings Institute, 181 (p.37).

B. Methods of Calculating Student Enrollments

The second major task addressed in this study is an analysis of methods of calculating the number of students with an emphasis on the most appropriate census date for collecting enrollment data and the use of traditional academic quarters for determining curriculum enrollment. In conducting this task, we have engaged in two general types of activities. First, we addressed the two specific questions listed above. In addition, we extended the scope of the initial task definition by examining selected issues related to the ways that the student enrollment data are used in the budgeting process.

Descriptions of the general issues involved in this task are provided in the following section. Succeeding materials present the task findings.

1. Issues

a. Appropriate Census Date

Student enrollment data are used for a variety of purposes within the Community College System. For example, they provide an historic record of the numbers of students served and the types of programs in which they are enrolled. However, for purposes of this study the primary use of student enrollment data is in the overall budgeting or resource allocation process. Budgeting within the Community College System is driven by the number of full-time equivalent (FTE) students at both the system-wide and individual institutional level. Student enrollments are calculated at the 20 percent point of the instructional process in each of the four quarters of the academic year. In this context, the number of FTEs serves to measure the workload or resources required to support instructional and other services provided to students. At the conceptual level, these workload measures, combined with the numbers of instructional and other staff per FTE and the salaries for each of these staff members, provide a basis for measuring the actual costs of providing instruction and other student services. The budgeting process then functions to assure that institutions are appropriately reimbursed for these costs.

Thus, the basic issue with respect to the choice of appropriate census date is that the student enrollment calculated on that date should provide appropriate estimates of the faculty and staff workloads throughout the academic quarter. Since FTEs are aggregated from membership hours in each class, a significant amount of administrative and clerical resources may be necessary in preparing accurate and reliable calculations. Therefore, administrative feasibility and efficiency is a second issue with respect to the appropriate census date for calculating these enrollments.

b. Use of Traditional Academic Quarters

There are two major issues with respect to use of the traditional academic quarters for determining curriculum enrollments. The first is concerned with an appropriate measure of student workload throughout the academic year and whether a single quarter's enrollment (e.g., Fall Quarter) can be used as a single estimate of the workload for an entire academic year. The extent to which a single quarter's enrollment serves as an accurate estimate of the entire year's workload depends on the variability of the enrollment across quarters--the smaller the variation, the better the single quarter's estimate.

The second issue deals with the number of quarters for which enrollment data are averaged to provide inputs for the budgeting process. At the present time, for curriculum programs the highest three quarters' enrollment data for the most recent calendar year are used as the basis for the funding allocation for the coming academic year. Similar procedures are followed for extension programs, except that the average enrollment for the four quarters of the most recent calendar year are used. Therefore, the second issue becomes one of whether curriculum funding allocations should be based on a four or three quarter enrollment basis. However, the basic issue remains the same -- which method of computing average enrollments produces the best estimate of the student workload and associated costs of instruction for the complete academic year.

c. Use of Student Enrollment Data in Funding Formula

As indicated above, the student enrollment data are a principal input to the formula used to determine both total systemwide appropriations and the allocation of these appropriations to individual institutions. This workload measure then serves as a basis for determining the costs of providing services to these students. Thus, a primary issue with respect to using student enrollment data in the funding formula is whether the method of calculating student enrollments provides an appropriate basis and input for estimating these costs.

More specific issues include whether the student enrollments should be measured on a membership (contact) hour or a credit hour basis. The former indicates the amount of time that students actually spend in class, while the latter reflects the amount of academic credit provided for successfully completing the course. A second issue with respect to use of enrollment data in the funding formula is the accuracy of the data and the costs of various audit and other verification procedures needed to assure that accuracy. Multiple checks and balances can be incorporated into the procedures for preparing these enrollment estimates to achieve the highest levels of accuracy.

The third issue is whether an input-based formula, such as the current FTE-based procedure, is the most appropriate basis for resource allocation within the System. The current procedures do not provide any basis for recognizing the quality of a given institution's program or the subsequent contributions to the state's economy by graduates of their training programs. Similarly, since it is based on historic enrollment figures, it is difficult to use this approach for setting priorities or providing incentives for institutions to pursue new directions that are not reflected in past enrollment trends.

2. Appropriate Census Date

a. Feasible Alternatives

In developing information concerning the appropriate date for calculating student enrollments, we initially established three alternatives to the current practice of calculating enrollments at the 20 percent point: (1) opening day's enrollment, (2) the end of the official drop/add period for receipt of academic credit, and (3) the end of the academic quarter. However, information obtained during the interviews in our 12 site visits indicated that the opening day's enrollment data could be somewhat unreliable, particularly in some of the smaller, rural institutions. Primarily for this reason, this alternative was excluded from further consideration and we restricted our attention to the other two alternatives mentioned above.

b. Selection Criteria

As indicated in the issues section above, the primary criterion used to select the appropriate census date for calculating student enrollments is that the date selected should provide a reasonable basis for estimating the student workload for an entire academic quarter. We recognize that, particularly with the open-door policy of the Community College System, enrollments will vary throughout a quarter. For example, counting enrollments for multiple entry, multiple exit courses on a single date would be infeasible. However, from a cost efficiency standpoint use of an average daily membership basis is not judged to be feasible.

The second criterion for selecting the appropriate census date is the administrative burden on the institution to calculate the enrollments. With the adoption of the Prime computer and associated software packages throughout the System, the clerical workload required to calculate enrollments has been significantly reduced. It should also be noted that the Community College System has implemented a comprehensive software system that can be used to generate financial, enrollment, and payroll information and for a variety of other purposes. Therefore, given the comprehensive nature of this software package and the fact that it can be used to calculate enrollments with appropriately trained staff at each institution this criterion may have potentially been met.

Third, since at the present time institutional budget allocations are largely based on enrollment data, the potential exists for misrepresenting this information. Examples of this falsification have occurred in the past and interviews conducted during this study confirmed that the potential still remains. Therefore, a third criterion for selecting the appropriate census date is that the enrollment data should be readily amenable to verification and audit. Finally, the selection of the census date should have a minimal impact on accessibility of courses to students and on the students' academic progress.

c. Results

Our first activity in this task was to assess the differences that would occur in enrollments if different census dates were used for their calculation. This information was received from two sources. First, during the site visits to the 12 institutions we asked registrars to provide information on curriculum FTE enrollments at the official 20 percent point and at the close of term for the fall quarter of 1985. It was anticipated that this would provide the most reliable estimates of enrollment changes, as the information would be based on actual enrollment records.

Our second source was to ask the presidents, through the president's questionnaire, to estimate quarterly enrollments at the end of the drop/add period, the 20 percent point, and the end of term. Although this information was obtained from a larger number of institutions, in the majority of cases it was based on the presidents' best estimate and therefore was not judged to be as reliable as the information obtained from official enrollment data.

The first source did not yield as much information as we had anticipated. Only five of the 12 institutions visited were able to provide us with the information requested during the time period of our field work and without excessive administrative burden. In the aggregate, these five institutions reported a total curriculum enrollment of 9,133 FTE students for the fall quarter 1985 at the 20 percent point. At the end of the fall quarter, the aggregate FTE enrollment had changed to 7,624, a decrease of 16.5 percent. Since these data are based on enrollments from only five institutions, they do not provide a sufficiently reliable basis for estimating enrollment changes across the entire System.

It should be noted that information for developing these calculations is apparently readily available in the information base maintained for the Prime computer system. Administrative staff at one institution visited were able to generate the end of quarter FTE enrollments in approximately 30 minutes, using existing files in the data base. Unfortunately, this institution was visited relatively late in the cycle and there was insufficient time to provide setup instructions for generating these data to other institutions included in the site visits.

The second estimate of changes in enrollments was obtained from responses to the president's questionnaire. Presidents were asked to provide estimates of FTE enrollments at the end of the drop/add period and at the end of the quarter. Estimates were provided on a percentage basis, using a reference of 100 percent for FTE enrollments calculated at the official 20 percent point. These estimates were provided for four enrollment categories: college transfer, other curriculum, adult basic education, and other regular budget extension.

Summaries of these responses are indicated below in Tables 10 and 11. Since the responses did not refer to a specific time period, we have applied the percentage estimates to two separate enrollment periods: fall quarter 1984 and annual average enrollments for the 1984-85 academic year, the latest year for which complete enrollment data are available. As shown in the tables, the number of usable responses varied according to the program category under consideration.

As indicated in the tables, there are only minor differences between enrollments at the end of the drop/add period and the 20 percent point of the quarter. This finding is to be expected since, for a large majority of institutions, the end of the drop/add period and the 20 percent point occur at about the same time during the quarter.

In general, the presidents' estimates of the reductions in enrollments between the 20 percent point and the end of the quarter are consistent with the actual percentage changes at the five institutions in the fall quarter of 1985. College transfer enrollments were estimated to decline by approximately 11 percent over this time period, while other curriculum enrollments are estimated to decline by 16 percent. Although it would be possible to compute a single percentage decline for all curriculum programs from these responses, we did not choose to carry out the calculation. From the results in the tables, the estimated percentage decline in enrollments for all curriculum programs would probably be somewhere on the order of 13 to 14 percent.

Although these percentage declines may seem significant, it is difficult to assess their impacts on actual instructional costs. If a student drops a course that is taught in only one section, there will be little change in instructional costs, unless a large number drop out and the entire course is cancelled. In multiple section courses, the number of dropouts may be sufficiently high that a section is cancelled. In this case there may be some savings in instructional costs if the instructor is working on a part time basis and is not reassigned. No estimates of the number of cancelled sections were developed during this study. However, a general review of supporting registration data at the 12 site visit institutions indicated that a large portion of courses are taught in only one section. If this pattern holds

Table 10

Estimated Variations in FTE Enrollments at Different Census Dates--Fall Quarter 1984

Curriculum	End of Drop/Add Period	20% Point	Percent Change from 20% Point	Close of Quarter	Percent Change from 20% Point
College transfer (20)[1]	7,706	7,510	+2.6	6,670	-11.2
Other curriculum (50)[1]	63,380	62,136	+2.0	52,211	-16.0
Adult basic education (35)[1]	5,363	5,294	+1.3	4,262	-19.5
Other regular budget extension (37)[1]	29,192	28,651	+1.9	24,111	-15.8

Source: Responses from questionnaires submitted to presidents of institutions in community college system.

[1] Number of institutions for which complete data were available.

Table 11

Estimated Variations in FTE Enrollments at Different Census Dates--Annual Average 1984-85

Curriculum	End of Drop/Add Period	20% Point	Percent Change from 20% Point	Close of Quarter	Percent Change from 20% Point
College transfer (20)[1]	6,095	5,949	+2.5	5,292	-11.0
Other curriculum (50)[1]	53,075	52,013	+2.0	43,710	-16.0
Adult basic education (35)[1]	4,928	4,864	+1.3	3,940	-19.0
Other regular budget extension (37)[1]	28,132	27,648	+1.8	23,285	-15.8

Source: Responses from questionnaires submitted to presidents of institutions in community college system.

[1] Number of institutions for which complete data were available.

throughout the System it is unlikely that significant savings in instructional costs can occur as students drop a course. Finally it should be pointed out that the estimated percentage enrollment reductions for curriculum courses were relatively uniform across all institutions. If these reductions are stable over time, presidents and academic deans can anticipate the dropout process during the quarter and avoid starting multiple section courses when it is anticipated that a single section will be adequate in the latter stages of the quarter.

Dropout percentages for the adult basic education program were somewhat higher than for the curriculum programs. This is consistent with the nature of the instructional process for the former, as students study at their own pace with some receiving their certificate prior to the end of the quarter. The dropout percentages for the other regular budget extension programs were not significantly different from those for the curriculum programs.

A second source of information concerning the appropriate census date for calculating enrollments was obtained from responses to an item on the president's questionnaire asking for ways in which administrative procedures for calculating student enrollments could be improved. Responses to this open-ended question are summarized in Table 12. As indicated, they have been organized into categories corresponding to the timing of reporting, the basis of reporting, reporting procedures, and other. The timing category is related most directly to the specific question under investigation, while the basis and procedures categories provide insights to the criteria for selecting a reporting date and the uses of the enrollment data in the resource allocation process.

As shown in Table 12, approximately 40 percent of the responding presidents were satisfied with the current 20 percent reporting point. Of the 11 respondents who expressed a specific preference for an alternative reporting date, seven indicated that the reporting date should be tied to either official registration receipts or the end of a drop/add period.

Although the question was not phrased to elicit comment on the basis for reporting students, six presidents provided a response in this category. These responses indicated minimal support for head count rather than FTE reporting, full credit for summer quarter FTEs (related to the next issue) and counting all students who have enrolled.

Table 12

Presidents' Suggestions for Improving Administrative Procedures for Reporting Student Membership Hours

Suggestion	Number of Responses[1]
Timing	
Satisfied with 20% point	20
Registration receipts/end of drop/add period	7
Close of quarter	2
30% point of quarter	1
Beginning of quarter	1
Basis of Reporting	
Headcount rather than FTE	2
Full credit for summer quarter FTEs	2
Any student who has enrolled	2
Reporting Procedures	
Fully integrated with Prime software package	6
More timely reporting	2
Simplicity--report membership hours at 20% point for all classes	1
Other	4
No Response	9
TOTAL	59

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[1] Questionnaires were received from 54 institutions. Number of responses exceeds this total due to multiple responses by some presidents.

Responses in the last category indicated preferences for improving the administrative efficiency of the reporting process. Six of the nine respondents in this category indicated that the student membership reporting should be fully integrated with the Prime computer software package. Two respondents expressed a concern for administrative efficiency by calling for more timely reporting, while one respondent urged that the entire reporting process be simplified to report membership hours at the same time (20 percent point) for all classes.

Additional information in support of the selection of appropriate reporting date was gathered during the extensive interviews conducted with presidents and other administrative officials during the site visits to the 12 institutions. In general, all respondents expressed a strong preference for an FTE-based resource allocation process. However, they indicated that the number of FTEs calculated should provide a valid measure of their workload throughout the entire quarter. In turn, this workload measure should be used to provide an indication of the actual costs of providing services to the students.

Respondents indicated that, in considering alternative census dates for calculating enrollments, one should be aware of two commitments that are made during the course of an academic quarter's instruction. First, the institution must make a commitment to instructors and other staff based on the number of students that are enrolled. Second, and perhaps more importantly, the institution makes a commitment to the student to provide the instruction for which the student has registered. The consensus along administrators interviewed was that both of these commitments are essentially finalized at the conclusion of the drop/add period each quarter. At this time, the number of classes and, if appropriate, sections are determined and the institution has a firm idea of the instruction that must be provided. While sections can be combined, classes cancelled, and instructors added or reassigned prior to the drop/add period, at this point contractual commitments for the remainder of the quarter must be finalized. Administrators strongly believe that they must honor these commitments to attract and retain appropriately qualified instructional staff.

This same commitment is made to the student at the end of the drop/add period. At this time, the student has indicated his or her interest in attending the course, has paid the required fees, and expects to receive instruction and a grade for the course. Some administrators believed that the use of an alternative census date, with potential changes in funding levels, might lead to situations in which these commitments to the students could not be honored.

Potential impacts of the use of alternative census dates on the access of students to educational courses were also discussed during these interviews. Some respondents believed that use of the end of quarter as a census date might provide temptations for institutions to retain students on official class rolls who really preferred to drop a course. The opinion was expressed that some of these students would not attend the course, thereby receiving a failing grade whereas now they can drop a course with no academic penalty. These individuals indicated that receipt of a failing grade might act as a disincentive for students to continue their education in a situation in which they need all of the positive reinforcement possible to develop self esteem and overcome reluctance to pursue postsecondary education opportunities.

3. Use of Traditional Academic Quarters

a. Alternatives

As previously indicated, there are two issues to be considered in the use of the traditional academic quarters to calculate enrollments for the formula allocation process: (1) whether quarterly figures should be used at all, and (2) whether the same quarterly basis should be used to provide enrollment data for both curriculum and extension programs. In turn, these issues generate two sets of alternatives. The first would be to use a single quarterly enrollment figure (e.g., Fall Quarter) as a single basis for the entire year's enrollment data. Corresponding to the second issue, the alternative would be to use the same basis for developing both curriculum and extension enrollments for the budgeting process.

b. Selection Criteria

The principal criterion for selecting among these alternatives is which provides the best estimate of student workload and associated costs of instruction throughout the complete academic year. This criterion recognizes the purposes for which the enrollment data are used--to allocate financial resources to each of the institutions. A second, and somewhat less important, criterion is administrative simplicity. The current use of different procedures for calculating curriculum and extension enrollments does introduce additional administrative requirements and complexities into the budgeting process. To the extent that these procedures were standardized these complexities might be eased.

c. Results

Two sources of data were generated to address the issues associated with this task. The first was a comparison of quarterly variations in enrollments across the entire System while the second consisted of responses to appropriate questions on the president's questionnaire. Each of these will be examined in turn.

Table 13 presents some evidence on the variation in systemwide enrollments across quarters for the most recent seven years. A variety of measures of this variation can be developed (e.g., the range in enrollment totals across the four quarters of the academic year, the variance or standard deviation in these enrollments). To provide a basis for comparing the effects of the different procedures used to provide curriculum and extension FTEs on the budgeting process, we have presented summer quarter FTE enrollments as percentages of annual average enrollments, since historically the lowest enrollments are experienced in the summer quarter.

As shown in Table 13, summer quarter enrollments are lower than annual average enrollments for both curriculum and extension programs. In general, summer quarter enrollments average approximately 60 percent of the annual average figures for curriculum enrollments and approximately 80 percent for regular budget extension programs. With the exception of extension enrollments for the 1984-85 academic year, these percentages have been relatively consistent for the past seven years.

These results indicate that a fairly significant variation in enrollments, and associated workloads, does exist across the four quarters of the academic year. In addition, this variation is greater for curriculum than for extension programs, as the summer quarter enrollments are lower proportions of the annual average figures for the curriculum programs. Thus it would appear that an enrollment total based on a single quarterly figure may not provide an accurate estimate of the workload for the entire academic year.

Table 13

Relationship Between Summer Quarter and Annual Average FTE Enrollments

	Curriculum			Extension		
Year	Summer Quarter	Annual Average	Summer Quarter as a Percent of Annual Average	Summer Quarter	Annual Average	Summer Quarter as a Percent of Annual Average
1984-85	46,629	73,888	63.1	32,945	47,373	69.5
1983-84	50,556	77,658	65.1	38,764	47,241	82.1
1982-83	48,612	80,356	60.4	41,935	49,012	85.5
1981-82	47,295	77,576	60.9	41,912	50,940	82.3
1980-81	45,012	74,178	60.7	41,362	52,248	79.2
1979-80	44,535	70,303	63.3	41,670	52,188	79.8
1978-79	42,442	68,544	61.9	48,489	56,620	85.6

Source: Annual Enrollment Reports, North Carolina Department of Community Colleges.

An additional issue related to the use of a single quarterly enrollment figure in the resource allocation process was indirectly identified during discussions with administrators during the institutional site visits. In discussing the budgeting process in general, several individuals brought up the topic of the "3% rule" that was initiated this year to adjust budget allocations among institutions with growing and declining enrollments. Some respondents mentioned intensive recruitment programs that had been undertaken to increase enrollments for the fall quarter of 1985. Some of these individuals believed that the decline in curriculum enrollments between the fall and winter quarters for the 1985-86 academic year would be somewhat greater than long term experience. In their opinion, this greater than average decline would result from these extraordinary recruitment efforts and the fact that some institutions had insufficient guidance and counseling staff to provide the necessary support to these students in continuing their education. The unstated implication was that basing budget allocations on a single quarter's enrollment totals might lead to similar "one shot" recruitment efforts, with the resulting imbalances in workloads for both instructional and student support services.

The issue of different bases for calculating curriculum and extension enrollments for budgeting purposes was addressed through responses from the president's questionnaire and from interviews during the site visits. Apparently these differences are not a major issue among senior administrative staff in the institutions throughout the System. As indicated in Table 12, only two presidents called for full credit for summer quarter courses when asked to suggest ways to improve administrative procedures for reporting student membership hours. This topic also received little attention during discussions during the site visits. The principal issue with respect to differences in budget allocations between curriculum and extension programs was the relative dollar values of the instructional units for the two programs, not the procedures for calculating enrollments. Additional insights into these concerns are provided in the next section.

4. Use of Student Enrollment Data in Funding Formula

a. Alternative Approaches

Our first task in examining this issue was to assess the appropriateness of an enrollment or input-based approach to budgeting within the

Community College System. As indicated in earlier parts of this section, there are a number of shortcomings to this approach: it does not recognize quality of instruction; since it is based on historical data, it is difficult to use as a basis for change or incentives for new directions; it may not provide an equitable basis across institutions for allocations; etc. These issues were addressed through discussions with presidents during the institutional site visits and through a review of relevant literature on budgeting procedures for Community College Systems in other states.

Although many of the presidents and other senior administrators with whom we spoke recognized the shortcomings of the FTE-based procedures, none suggested a better alternative. While, as discussed below, the details of the current process can perhaps be improved, these individuals are comfortable with the basic approach inherent in the FTE-based formula. Respondents stated that, in general, the FTE-based approach leads to relatively simple and straightforward budgeting procedures and formulas. In addition, the approach is conceptually easy to understand, as in general the resources allocated to an institution ought to be consistent with the institution's size, as reflected in its enrollment.

Confirmation of this general concensus was obtained by reviewing recent studies and reports on budgeting processes employed by similar systems in other states. During the past few years, both legislative bodies and comparable Community College Systems in a number of these states--California, Illinois, Florida, Virginia, and Maryland--have conducted numerous studies of the budgeting process. While some of these states are changing the ways in which they use the student enrollment data for budgeting purposes, all of them continue to allocate their funds to institutions on the basis of enrollments.

b. Basis of Calculating FTEs

Given the concensus to retain the basic structure of the FTE-based budgeting process, we next addressed the most appropriate ways for calculating and using the FTE data in this process. Both sound management principles and the opinions of several institutional presidents indicated that a basic premise of the budgeting process should be to reimburse institutions for the actual costs of providing instructional and other services to their students. In turn, this premise leads to the introduction of two additional concepts: the workload that the institution faces and the costs of providing instructional and supporting services to that workload. Since the basic purpose and mission of educational institutions is to provide learning opportunities to their students, enrollment data are the logical choice as a measure of the institution's workload. Different methods of calculating enrollments would of course lead to different measures of the student workload. Thus, the choice of calculation procedure should be that which provides the most valid estimate of the workload for faculty and administrative staff within the institution.

In general, a different basis can be used to measure the workload for instructional and support activities. With respect to the workload for instructional services, two choices are available: (1) class membership or contact hours or (2) credit hours. If credit hours were directly related to instructional time spent in the classroom, there would be little reason to select one of these measures over the other. Interviews during this study indicated that this was not the case, as there is widespread variation in the amount of class hours required for different levels of academic credit across the institutions in the Community College System. The Department of Community Colleges is currently in the process of standardizing the number of credit hours awarded for each curriculum across institutions. However, the results of this effort are not yet available. Therefore, at the present time, contact or membership hours provide a more appropriate measure of the workload than credit hours. Issues with respect to valid measurement of the workload for instructional support and other services are addressed in the findings for tasks 1 and 3 of this study and are presented elsewhere in this section.

c. Budgeted Costs of Providing Services to Students

Within this budgeting framework, the process is completed by estimating the costs of providing services to students. As indicated in the findings from task 1 of this study, at the present time procedures for assessing and reimbursing the institutions for these costs are seriously deficient. Student/faculty ratios and dollar values for instructional units that are input to the budgeting process are not closely related to actual operating conditions currently faced by the institutions. These costs can vary by factors such as instructional program, size of institution, and conditions in the labor markets from which faculty and staff are hired. Single values of student teacher ratios and values of instructional units used for programs across the institutions, which face a wide diversity of operating conditions, fail to capture adequately these variations.

It should, however, be noted that the current budget allocation formula implicitly recognizes some differences in the costs of serving the workload. These are reflected in the differential values of the instructional units for curriculum and regular budget extension program and the recognition of a higher number of contact hours to complete technical and vocational versus college transfer curricula. However, the current formula fails to consider adequately issues such as restrictions on the student teacher ratios for instructional courses requiring certification, which occur primarily in the health area, and the effects of changes in instructional technology on costs.

As a result, respondents interviewed during the site visits believed that the factors currently used in the budgeting process serve primarily as "balancing factors" that are used by the staff of the Department of Community Colleges and the General Assembly to match total appropriations with projected FTE levels. Respondents also stated that the current procedures did not represent a meaningful budgeting process in the sense that institutions are not able to develop realistic estimates of their costs of instruction, with the expectation that they will be reimbursed for these costs. Respondents also stated that the relative prices used in this process do not reflect reality, leading to less than optimum patterns of resource allocation and to the expenditure of excessive amounts of administrative costs to overcome these inefficiencies.

C. Trends in Mix of Full-Time and Part-Time Students, and Impact of Changes

1. Overview of Task

The third concern raised by the General Assembly has to do with the impact the shift to more part-time students has had on the need for Administrative and Instructional Support Personnel. The basis for the question lies in a number of observations and logical interpretations. First, while the FTE values for the System as a whole have remained relatively constant, the numbers of less than full-time students have increased over the last seven years, as is readily apparent from the annual enrollment reports showing both the Unduplicated Headcounts (representing the actual numbers of students), and the FTEs, representing under budget formula conventions a measure of instructional load based on student-instructor contact hours. Because student-instructor hours have different credit hour equivalents from program to program (with vocational and technical programs generally involving more student contact hours per credit hour than college transfer courses, for example), the FTE is non-equivalent but nevertheless related to the more conventional credit FTE, which is a measure of aggregate enrollment weighting credit hours for which enrolled. Thus, the observation that institutions are in current markets requiring larger numbers of students to generate a specific number of FTEs is reasonable.

Second: budget allocations in the administrative and instructional support areas are, as in instructional areas, based on the FTE. While the FTE is logically a good measure of instructional time required, and while the administrative and instructional support allowances may have been reasonable at the original point when the relationships between FTE and support needs were calibrated from analyses of costs, it is also logical to assume that any positions not driven by FTE but by numbers of students would be affected by the increase in part-time students. While some administrative or instructional support positions are required regardless of institutional size (e.g., president, business manager, librarian), need for other positions may be more closely associated with numbers of students than with FTEs. For example, a registration clerk or financial aid officer needs as much time to process a part-time student as a full-time student.

2. Sources of Data Employed

In addressing this task, four data sources were used (in addition to the Department's 1985 Staffing Needs Survey analyses reported in subsection A of this section). First, the enrollment reports for the years from 1978-79 through 1984-85 were examined, together with statistical data for the same period, maintained by the Department of Community Colleges, or the numbers of students registering for various credit hour loads in each of the several curriculum programs (these data were drawn from the quarterly registration reports).

Second, selected data were drawn from the institutional questionnaires, in particular the president's report of adequacy of the current formulas for covering numbers of positions and salaries for various positions, as well as their responses to the direct question as to what positions are affected by the numbers of students rather than the FTEs. The first questionnaire data element provides a means for determining if differences among institutions in current mix (or in the rapidity of change in mix over the areas since 1978-79) of full-time versus part-time students are associated with perception of adequacy of formulas in specific areas where it is logical to assume a relationship. The second questionnaire data element provides an opportunity to obtain the judgment of the presidents which, in spite of the possibility of bias, must have some relationship to experience in fitting allocations to needs as permitted under allowable local options.

A third data source was the questionnaire administered to a sample of full and part-time students in the 12 basic study institutions, which inquired about their interests, needs, and utilizations of special services and facilities. This effort permitted a determination of the extent to which less than full-time students may be affected, in comparison with full-time students.

A final source of information was the direct response, in personal interviews, of various administrative and instructional support staff in the 12 basic study institutions, who were asked about needs in this regard (as well as about economies or efficiencies used in meeting the demands of their positions or positions supervised). These questions were guided, of course, by awareness on the part of the interviewers as to current mix and trends in mix from pre-visit examination of enrollment data.

3. Data Analyses and Findings

a. Enrollment Trends for the System as a Whole

It is appropriate, first, to examine the precise data on the enrollment experience of the System over the 1978-85 period. Figures 1 through 5 present, for the System as a whole, and for each of the seven years, the numbers of students in the several curriculum programs (and in the combined curriculum programs) who registered for one-quarter, two-quarter, three-quarter, or full credit hour loads (1-5 hours, 6-8 hours, 9-11 hours, and 12 or more hours, respectively).

Figure 1 shows the numbers of all curriculum students registered for the four levels of academic load. While numbers of full-time students increased somewhat from 1978-79 through 1982-83, the full-time numbers have been decreasing since that time. Although much smaller numbers of students generally register for half-time or three-quarter time loads, there have been slight and generally continuous increases in the numbers registered at these levels. The sharp, continuous, and significant increase has been in the numbers registered for one-quarter loads, moving from about 57,000 students in 1978-79 to almost 100,000 students in 1984-85, with the numbers in one-quarter status first exceeding the numbers in full-time status in 1980-81, but reaching a point in 1984-85 where the number of one-quarter time students is almost twice the number of full-time students.

Figures 2, 3, 4, and 5 show the System enrollments by academic load in the College Transfer, General Education, Vocational, and Technical programs. Each program has its own distinct pattern of change in this regard. In the College Transfer program (Figure 2), the majority of students have been full-time, and the trends relatively even, until the most recent year, when there was a significant increase in the number of one-quarter time students. This recent increase is primarily a result of a change made in 1984-85 in coding: to reflect more accurately the intent of students, they were classified in terms of program by assigning them to the program category in which most of their courses fell. In the Vocational program (see Figure 4) full-time students have always, over the period examined, been in the majority, though beginning in 1983-84 the numbers of one-quarter time students have been increasing and the numbers of full-time students decreasing. For the Technical programs (Figure 5), the number of quarter-time students, which was less than half the number of full-time students in 1978-79, has increased continuously, with the substantial apparent increase in 1984-85 probably precipitated in large part by the change made by the Department in coding enrollment for 1984-85.

Another way of illustrating the changes in FT/PT mix is to examine the proportions of students, in each curriculum program or in the curriculum programs as a whole, who registered for each of the four levels of academic load. Such data are displayed in Table 14 for 1978-79 and for 1984-85.

From this perspective, it is readily apparent again that the proportions of half or three-quarter time students have not changed very much; that general education is largely a program for quarter-time students then and now; but that the increase in proportions of part-time students and corresponding decrease for proportions of full-time students is largely a phenomena of the College Transfer and Technical programs (where in 1984-85 only about one in

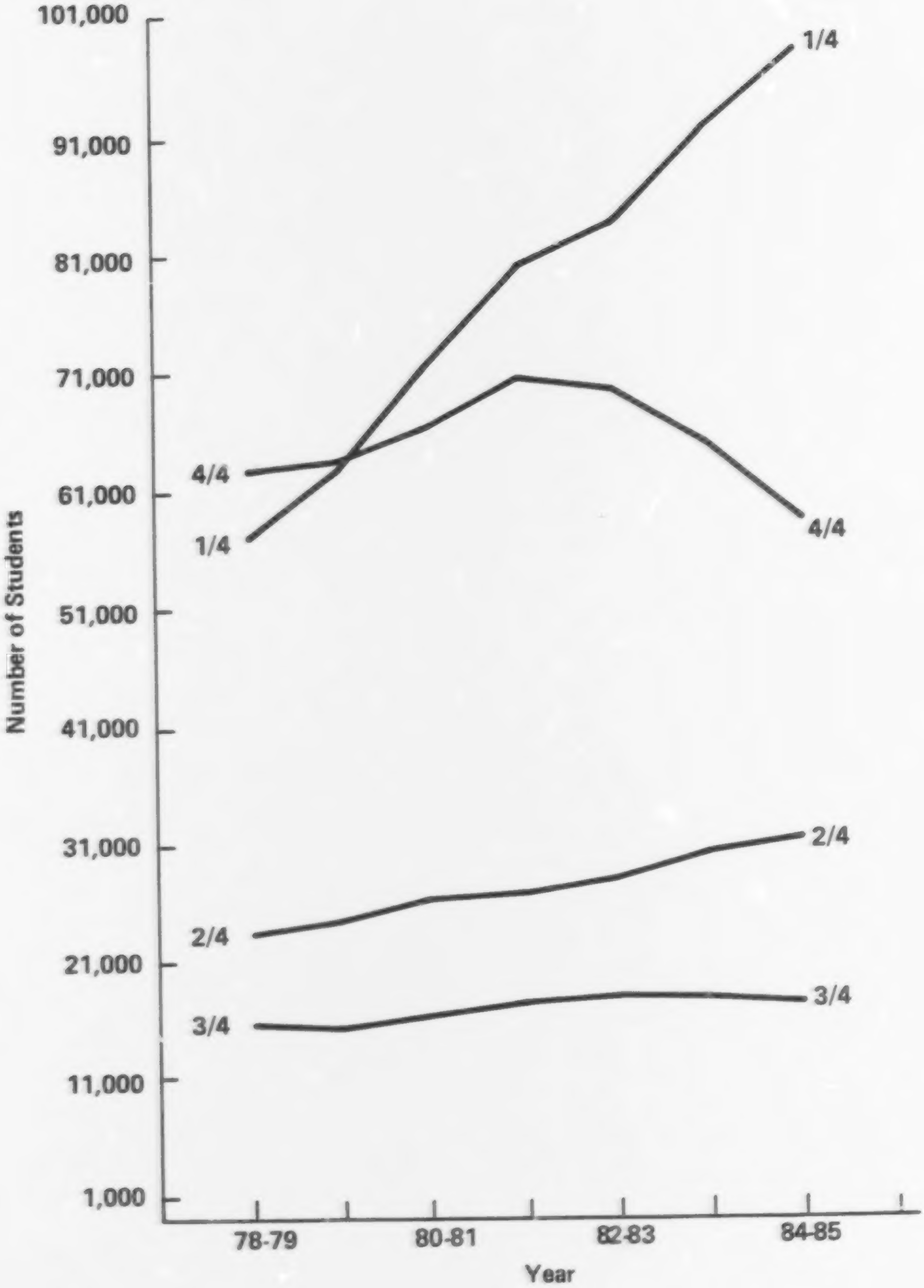

Figure 1. Numbers of Students by Academic Load, in All Curriculum Programs, 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges.

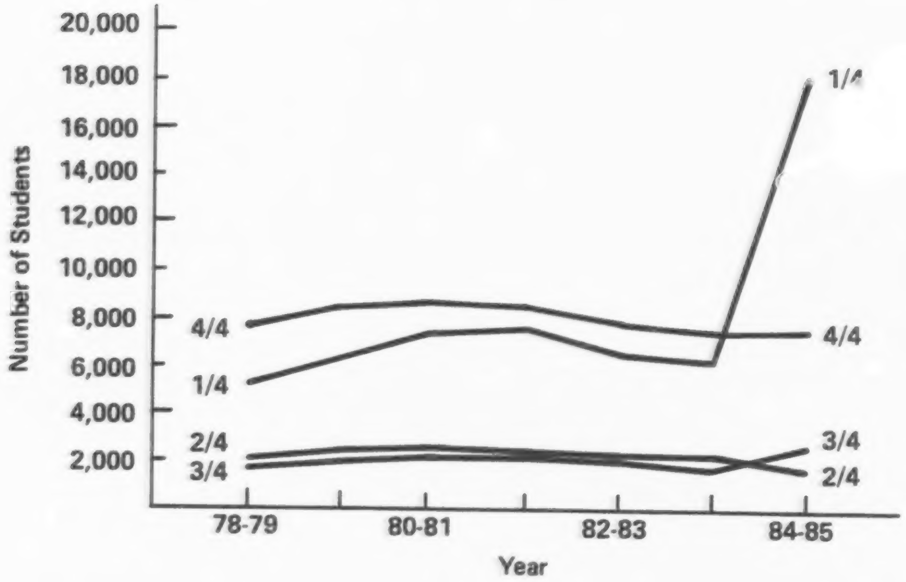

Figure 2. Numbers of Students by Academic Load, in All College Transfer Programs, 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges.

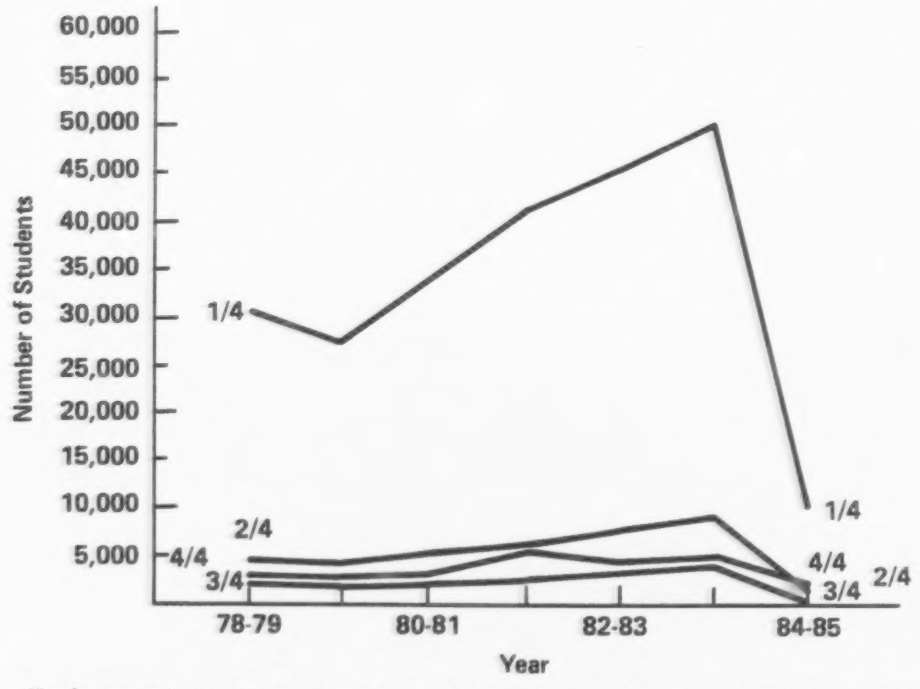

Figure 3. Numbers of Students by Academic Load, in All General Education Programs, 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges.

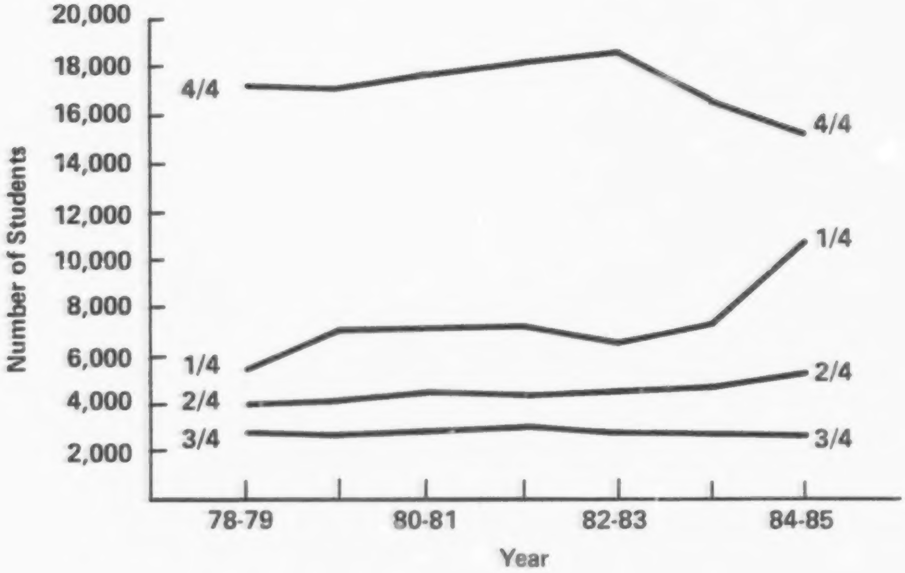

Figure 4. Numbers of Students by Academic Load, in All Vocational Programs, 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges.

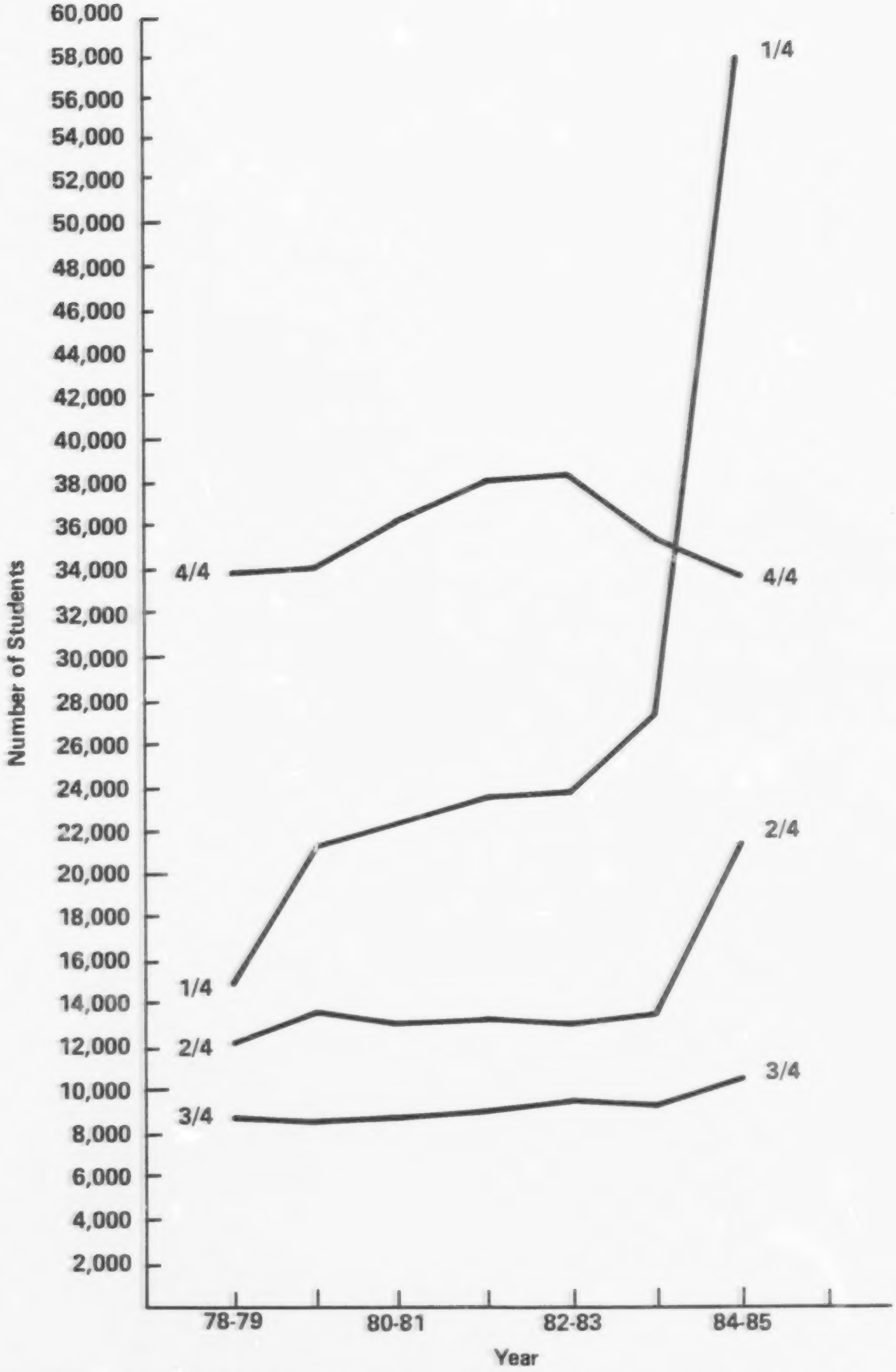

Figure 5. Numbers of Students by Academic Load, in All Technical Programs, 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges.

Table 14

Proportions of Students Registering in Each of the Several Curriculum Programs Who Were One-Quarter, One-Half, Three-Quarters, or Full-Time Students in 1978-79 and in 1984-85

		Proportion Who Were:				
Program	Year	1/4	2/4	3/4	4/4	Total
College Transfer	1978-79	31%	12%	11%	46%	100%
	1984-85	58%	10%	8%	24%	100%
General Education	1978-79	74%	12%	5%	8%	100%*
	1984-85	69%	11%	6%	14%	100%
Vocational	1978-79	19%	14%	10%	58%	100%*
	1984-85	32%	16%	8%	44%	100%
Technical	1978-79	22%	17%	13%	48%	100%
	1984-85	47%	17%	9%	27%	100%
All Curriculum Programs	1978-79	36%	15%	10%	39%	100%
	1984-85	48%	15%	8%	29%	100%

* Row entries do not add up to 100% because of rounding.

Source: Enrollment records maintained by the Department of Community Colleges.

four students were enrolled full-time). The Vocational programs also echo this trend of increase in proportions of part-time students, but with still almost half their students enrolled full-time in 1984-85.

While the basic question raised by the General Assembly is focused on changes in full-time/part-time student mix, it would seem more appropriate to deal with the Unduplicated Headcount, or UDHC, which may affect position requirements where the cumulative number of students, not their credit or classroom contact hours, determines necessary work time. Figure 6 shows, for the Curriculum programs for the System as a whole, the trends from 1978-79 through 1984-85 in contact FTEs (as drawn from the Department's annual enrollment reports) and in UDHCs. Also shown is the "credit FTE," a statistic representing the number of equivalent full-time students if credit hours at the close of registration were used to compute FTE (e.g., where four one-quarter time students equal one FTE, etc.).

While contact FTE (and credit FTE) increased from 1978-79 through 1982-83, there have been continuous declines since that time; yet, the UDHC has continued to increase. (The increase was marked from 1979-80 through 1981-82, but there has been a tendency toward leveling off since then.) This suggests that if adjustments in administrative and instructional support positions are needed to be made as a function of sharper increases in Unduplicated Head Count than in FTE, the brunt of this pressure would have been felt in the 1978-82 period.

b. Enrollment Trends for the Individual Institutions

Before proceeding to determine if System staffing needs are associated with System enrollment trends on the several indices, it is appropriate to note how accurately the current System status or trends on these indices reflect individual institution status or trends.

First, it should be noted that the proportions of curriculum students who were full-time in credit hours of registration varied substantially among institutions in 1978-79 (from 18 percent for Central Piedmont Community College to 74 percent for Haywood Technical College), and in 1984-85 (from 16 percent for Central Piedmont Community College to 58 percent for Bladen Technical College). The distributions of institutions on this variable (proportion of full-time students) in 1978-79 and in 1984-85 are provided in Tables 15 and 16.

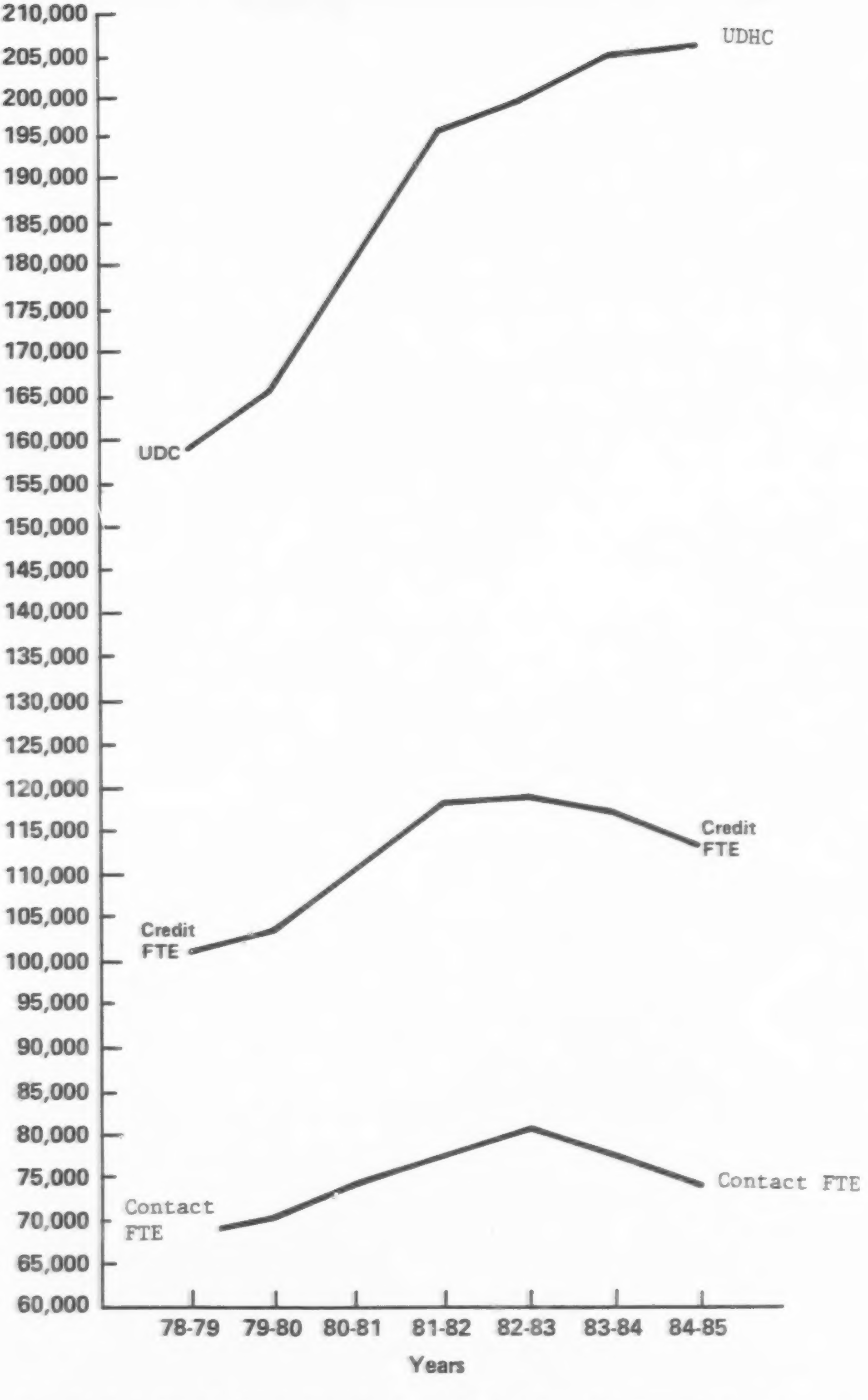

Figure 6. Curriculum Enrollment Trends for the System in Terms of the Contact FTE, the Credit FTE, and the Unduplicated Headcount: 1978-79 through 1984-85

Source: Enrollment records maintained by the Department of Community Colleges, and the Annual Enrollment Reports of the Department.

Table 15
Numbers of Institutions with Various Proportions of Full-Time Students in 1978-79

Proportion of FT Curriculum Students, 1978-79	Numbers of Institutions	Identities of Institutions in Top and Bottom Categories
10-19%	1	Central Piedmont
20-29%	3	Stanly; Surry; Wilkes
30-39%	14	
40-49%	18	
50-59%	13	
60-69%	6	Bladen; James Sprunt; Mayland; Richmond; Sandhills; Wayne
70-79%	1	Haywood

No. of Institutions: 56 (Data not available for Brunswick and Johnston)
Median Value on Index: 43.5%
Range: 18% to 74%

Table 16
Numbers of Institutions with Various Proportions of Full-Time Students in 1984-85

Proportion of FT Curriculum Students, 1984-85	Numbers of Institutions	Identities of Institutions in Top and Bottom Categories
10-19%	5	Central Piedmont; Isothermal; Stanly, TCA, Wilkes
20-29%	14	
30-39%	21	
40-49%	14	
50-59%	3	Bladen; James Sprunt; Wayne
60-69%	0	
70-79%	0	

No. of Institutions: 57 (Data not available for Anson)
Median Value on Index: 33%
Range: 16% to 58%

While the data in Tables 15 and 16 show the general decline in proportions of full-time students, they show also the move toward greater homogeneity in this regard.

System institutions also vary from one to another in the extent of change between 1978-79 and 1984-85. Table 17 shows the distribution of institutions on a change index defined as the ratio of the proportion of full-time students in 1978-79 to the proportion of full-time students in 1984-85. On this index, a value of less than 1.0 indicates an increasing proportion of full-time students; a value of more than 1.0 indicates a decreasing proportion of full-time students; and a value of 1.0, no change.

Table 17

Distribution of Institutions as an Index of Change in Proportions of Full-Time Students from 1978-79 to 1984-85

Ratio: Proportion FT, 1978-79 / Proportion FT, 1984-85	Numbers of Institutions	Identities of Institutions in Top and Bottom Categories
.81-1.00	3	Montgomery; Randolph; Sampson
1.01-1.20	13	
1.21-1.40	13	
1.41-1.60	13	
1.61-1.70	9	
1.71-2.00	1	Southwestern
2.01-2.20	1	Wake
2.21-2.40	1	Durham
2.41-2.60	0	
2.61-2.80	1	TCA

No. of Institutions: 55 (Data not available for Anson, Brunswick, and Johnson)
Median Value on Index: 1.37
Range: .95 to 2.61

While three institutions have the same or larger proportions of full-time students in 1984-85 than in 1978-79, three institutions have less than half the proportions of full-time students in 1984-85 than in 1978-79 (values of 2.01 or more in Table 17). The median institution has about 28 percent fewer full-time curriculum students in 1984-85 than in 1978-79.

One other index may be useful in describing student mix. This is the ratio between UDHC and contact FTE for selected years. For this descriptive analysis, the unduplicated headcount includes both curriculum and extension students. On this index, for example, a ratio of 3.0 would indicate three times as many actual students as their FTE equivalent. Table 18 shows the distribution of institutions on this index for 1978-79 and for 1984-85.

Table 18

Distribution of Institutions on an Index of Student Mix
Expressed by the Ratio of UDHC/FTE, for 1978-79 and for 1984-8

UDHC/FTE	No. of Institutions, 1978-79	Identities of Institutions in Top and Bottom Categories	No. of Institutions, 1984-85	Identities of Institutions in Top and Bottom Categories
2.1-3.0	1	James Sprunt	0	
3.1-4.0	8	Cape Fear; Durham; Haywood; Lenoir; Montgomery; Sandhills; Southeastern; Southwestern	6	Bladen; Cape Fear; Haywood; James Sprunt; Mayland; Montgomery
4.1-5.0	25		19	
5.1-6.0	18		22	
6.1-7.0	5	Blue Ridge; Cleveland; Fayetteville; Martin; Nash	7	
7.1-8.0	0		2	Sampson; Stanly
8.1-9.0	0		2	Coastal Carolina; Pamlico
No. of Institutions	57		58	
Median Value on Index	4.7		5.1	
Range	2.9 to 6.6		3.2 to 8.6	

In 1978-79, the median institution had 4.7 times as many UDHC students than their FTE equivalent; by 1984-85, the median institution had 5.1 times as many UDHC students than the FTE equivalent. Four institutions, however, had at least 7 times as many UDHC students than their FTE equivalent in 1984-85 (Coastal Carolina, Pamlico, Sampson, and Stanly), and none had fewer than 3 times as many UDHC students.

c. Analysis of Staffing Needs as a Function of Enrollment Mix

The Institutional Questionnaire provided a list of 14 elements in the budget formula computations, and asked the presidents to rate the extent to which the present general allocation formulas generate adequate fiscal support for each element. If those institutions with higher numbers of students relative to the FTE react differently on some budget formula elements from those with lower numbers of students relative to the FTE, this would suggest that the formula has differential adequacy as a function of numbers of students required to generate an FTE.

Institutions with 5.2 times as many students as the FTE equivalent, or less (N=30) were compared with institutions with 5.3 or more times as many students as the FTE equivalent (N=25), in the responses of the presidents to the adequacy of the formulas for the various budget elements. The hypothesis is that institutions with larger numbers of students relative to FTE will more frequently perceive formula-generated support to be inadequate for administrative and instructional support elements than those with smaller numbers of students relative to FTE. Table 19 presents the proportions of institutions in each enrollment mix group that responded through the Institutional Questionnaire that budget elements were funded adequately, inadequately, or if they were uncertain. Those institutions with higher numbers of students per FTE perceived budget formula elements inadequate more frequently than those institutions with lower numbers per FTE on salaries for curriculum faculty, other curriculum costs, salaries for extension faculty, other extension costs, salaries (but not number of positions) for administrators, and library book costs. Although the differences are not large, it is interesting to note that formulas are perceived more frequently as inadequate by these institutions with high numbers of students relative to FTE: number of administrators, number of positions and salaries for instructional support, and numbers of positions and salaries for clerical staff, in addition to numbers of curriculum and extension faculty and costs of equipment. We also note that, in general, those with high numbers relative to FTE are more likely to perceive the formula support generally as adequate.

Another index of student mix that is reasonable to explore in the same way is the degree of change in the proportion of full-time students from 1978-79 to 1984-85 (this is the index reported in Table 17). Institutions that have been relatively stable in this regard should be less likely to perceive budget support elements as inadequate than those with an increase in part-time students over this period. Table 20 presents the ratings of adequacy of

Table 19
Ratings by Presidents of Adequacy of Support for Budget Formula Elements, in Terms of Proportions for Institutions with 1984-85 UDHC/FTE Ratios ≤ 5.2 (L) vs. Those with UDHC/FTE Ratios ≥ 5.3 (H)

		Present Procedure:			
Item of Support	Group	Adequate	Inadequate	Uncertain	No Response
No. Curriculum Faculty	L	17	76	7	0
	H	36	64	0	0
Salaries, Curriculum Faculty	L	7	86	7	0
	H	0	100	0	0
Other Curriculum Costs	L	28	62	10	0
	H	28	72	0	0
No. Extension Faculty	L	28	62	10	0
	H	48	44	8	0
Salaries, Extension Faculty	L	3	86	7	3
	H	4	96	0	0
Other Extension Costs	L	34	52	10	3
	H	36	72	0	0
No. Administrators	L	34	62	3	0
	H	56	44	0	0
Salaries, Administrators	L	3	93	3	0
	H	4	96	0	0
No. Instructional Support Positions	L	10	86	3	0
	H	20	80	0	0
Salaries, Instructional Support	L	3	93	3	0
	H	12	84	4	0
No. Clerical Staff	L	3	93	3	0
	H	16	80	4	0
Salaries, Clerical Staff	L	3	93	3	0
	H	20	80	0	0
Costs of Equipment	L	14	83	3	0
	H	16	76	8	0
Library Book Costs	L	45	52	3	0
	H	40	60	0	0

Table 20

Ratings by Presidents of Adequacy of Support for Budget Formula Elements, in Terms of Institutions with Low Change in Proportion of Full Time Students Between 1978-79 and 1984-85 vs. Those with High Change Over that Period

		Present Procedure:			
Item of Support	Group	Adequate	Inadequate	Uncertain	No Response
No. Curriculum Faculty	L	19	73	8	0
	H	28	72	0	0
Salaries, Curriculum Faculty	L	4	88	8	0
	H	4	96	0	0
Other Curriculum Costs	L	38	58	4	0
	H	20	72	8	0
No. Extension Faculty	L	35	58	8	0
	H	44	48	8	0
Salaries, Extension Faculty	L	0	88	8	4
	H	8	92	0	0
Other Extension Costs	L	42	50	4	4
	H	32	60	8	0
No. Administrators	L	46	50	4	0
	H	36	64	0	0
Salaries, Administrators	L	0	96	4	0
	H	4	96	0	0
No. Instructional Support Positions	L	12	85	4	0
	H	8	92	0	0
Salaries, Instructional Support	L	0	92	8	0
	H	12	88	0	0
No. Clerical Staff	L	8	85	8	0
	H	8	92	0	0
Salaries, Clerical	L	12	85	4	0
	H	8	92	0	0
Costs of Equipment	L	12	77	12	0
	H	20	80	0	0
Library Book Costs	L	42	54	4	0
	H	36	64	0	0

budget elements for 26 responding institutions when the (% FT 1978-79)/(% FT 1984-85) ratio is equal to or less than 1.40, in comparison with 25 responding institutions when the ratio is equal to or greater than 1.41. Of the 14 elements, ten are perceived more frequently as inadequate by the group with higher increase in part-time students. These are Curriculum Faculty Salaries, Other Curriculum Costs, Extension Faculty Salaries, Other Extension Costs, Number of Administrators (but not salaries), Number of Institutional Support Positions (but not salaries), Number of Clerical Support Positions, Clerical Salaries, Cost of Equipment, and Library Costs. Differences between the two groups are not, however, very great.

d. Presidents' Report of Positions Affected by Numbers of Students Rather than the FTE

The Institutional Questionnaire also specifically asked the presidents to name the faculty, staff, or support personnel positions where staffing needs, in their experience, are most closely and reasonably associated with numbers of students (i.e., the unduplicated headcount). (This question followed similar questions asking for basic positions needed regardless of institutional size, or for positions where needs were associated with the FTE.) Responses are shown in Table 21.

Although differences between the two groups of institutions are not marked, the kinds of positions believed most frequently determined by numbers of students rather than the FTE were, in the presidents' experience, in the areas of professional (non teaching), technical/paraprofessional, and clerical positions.

The positions reported as dependent on numbers of students rather than FTE are, for the most part, plausible. The failure to find striking differences in perception of the adequacy of the formulas associated with institutional difference in mix or change in mix, given substantial institutional variations in that regard, seems surprising at first.

Yet: we believe, with the principal supporting evidence to be probing in the site visits for explanations, that two basic factors exist that, working together, obscure more definitive findings. The first is the conviction that all institutions are very substantially pressed to meet operating costs within the basic allocations. Although we expected few if any presidents to state or imply that funding was adequate, we are convinced--from the salary schedules,

Table 21
Positions Associated with Numbers of Students: Institutions with Low and High Full-Time Changes in the Proportion of Part-Time Students

Position		Institutions in "Low" Change Group (N=26)		Institutions in "High" Change Group (N=25)		Total (N=51)	
Code	Title	No.	% of Responding Inst.	No.	% of Responding Inst.	No.	% of Responding Inst.
	Senior Administrators						
	Senior Admin., Unspec.	2	7.7	1	4.0	3	5.9
1103	Chief Business Officer	0	0	1	4.0	1	2.0
7107	Chief Evening Progams Officer	1	3.8	0	0	1	2.0
All Positions in Category**		3	11.5	2	8.0	5	9.9
	Administrators of Instructional Programs						
	Admin. of Instructional Programs, Unspecified	2	7.7	3	12.0	5	9.9
3115	Administrator-Continuing Education Programs	2	7.7	1	4.0	3	5.9
2116	Admin.-Other or Combined Instructional Areas	1	3.8	0	0	1	2.0
All Positions in Category**		5	19.2	4	16.0	9	17.6
	Administrators of Non Instructional Programs						
	Administrators of Non-Instructional Programs, Unspecified	0	0	1	4.0	1	2.0
5122	Admin.-Student Svcs.	2	7.7	0	0	2	3.9
All Positions in Category**		2	7.7	1	4.0	3	5.9
	Professional (Non Teaching)						
4335	Librarian	8	30.8	9	36.0	17	33.3
4336	Manager-IIC/Learning Lab	3	11.5	3	12.0	6	11.8
5337	Counselor	21	80.8	18	72.0	39	76.5
5338	Financial Aid Officer	8	30.8	11	44.0	19	37.3
5339	Placement/Follow-up	8	30.8	9	36.0	17	33.3
5340	Registrar	13	50.0	11	44.0	24	47.1
5341	Testing	6	23.1	10	40.0	16	31.4
5342	Manager-Veterans Affairs	0	0	2	8.0	2	3.9
7344	Computer Systems Admin.	1	3.8	1	4.0	2	3.9
7348	Public Inform. Officer	2	7.7	2	8.0	4	7.8
7360	Other Professional (Non-Teaching)	3	11.5	1	4.0	4	7.8
All Positions in Category**		73	280	77	308	150	294

Table 21 (continued)
Positions Associated with Numbers of Students: Institutions with Low and High Full-Time Changes in the Proportion of Part-Time Students

Position		Institutions in "Low" Change Group (N=26)		Institutions in "High" Change Group (N=25)		Total (N=51)	
Code	Title	No.	% of Responding Inst.	No.	% of Responding Inst.	No.	% of Responding Inst.
	Technical/Paraprofessional						
	Tech./Paraprofessional-unspecified	0	0	3	12.0	3	5.9
1552	Accounting Technical	1	3.8	0	0	1	2.0
2553	Instruc.Asst.-Curriculum	0	0	1	4.0	1	2.0
3554	Instruc.Asst.-Extension	0	0	1	4.0	1	2.0
4555	Library Assistant	1	3.8	1	4.0	2	3.9
4557	Audio-Visual Technician	0	0	1	4.0	1	2.0
7560	Computer Oper./Programmer	2	7.7	2	8.0	4	7.8
8563	Bookstore Manager	1	3.8	0	0	1	2.0
8564	Other Technical and Paraprofessional	2	7.7	0	0	2	3.9
All Positions in Category**		7	26.9	6	24	13	25.5
	Service/Maintenance						
6765	Maid/Janitor	0	0	1	4.0	1	2.0
6766	Security Guard/Watchman	0	0	1	4.0	1	2.0
6767	Maintenance Worker	0	0	1	4.0	1	2.0
All Positions in Category**		0	0	3	12.0	3	5.9
	Clerical						
	Clerical-Unspecified	8	30.8	10	40.0	18	35.4
7470	General Insti. Support	1	3.8	1	4.0	2	3.9
9471	Accounting Clerk	8	30.8	10	40.0	18	35.4
9472	Secretary	0	0	1	4.0	1	2.0
9474	Clerk/Typist (Instructional Programs)	1	3.8	2	8.0	3	5.9
9475	Other Clerical	1	3.8	0	0	1	2.0
All Positions in Category**		19	73.1	24	96.0	43	84.3
	Instructional						
	Faculty-Unspecified	11	42.3	9	36.0	20	39.2
	Faculty-Curriculum	0	0	1	4.0	1	2.0
	Faculty-Extension	5	19.2	6	24.0	11	21.6
All Positions in Category**		16	61.5	16	64.0	32	62.7
Other:	Student Services Positions	2	7.7	3	12.0	5	9.9

* Of 25 institutions in the "High" change group, 4 made no response to the basic question.

** Percents may exceed 100% because of multiple responses in the category.

from the compromises made to meet the most urgent needs, etc.--that most if not all of the institutions are operating under extremely stringent budgets. Second, under allowable local flexibilities in assigning budgets--and in working out economies or stringencies in one area to support costs felt or found necessary in another--we believe that the institutions have generally acquired the particular administrative and support staff needed to handle the particular configuration of students, which represent pressures and additional staff time requirements that simply cannot be ignored. We fear, however, that, if this be so, it is at some price exacted elsewhere.

e. Needs for Services by Full and Part-Time Students

The Student Questionnaire included a listing of certain facilities and services that are reasonable components of a public two-year institution, and asked them to rate the degree of importance to them that their institution provide each of the facilities or services. Table 22 provides selected representative results for students reporting themselves enrolled in the Curriculum Program for 1-5 credit hours (one-quarter time), 6-8 credit hours (half-time), three-quarter time (9-11 hours), and full-time (12 or more hours). The numbers in these four subgroups were, respectively, 71, 46, 32, and 432 (or a total of 581).

In general: fewer one-quarter time and half-time students (then full-time students) report that they perceive the various services listed as important, but it is clear that substantial portions nevertheless express need for the services listed. Greater proportions of the three-quarter time group than the full-time group, however, not infrequently appear to have needs for the services. This may be a function of the small sample sizes or of unknown biases in the sample (e.g., institutions focused on particular classes in program areas specified by the research team, and may by chance have obtained responses from a particular program group of students in this enrollment category that would for other reasons give greater importance to the services). The results could also be a function of inherent characteristics of this three-quarter time group: e.g., they are less likely to be employed full-time, or by enrolling for less than full-time are reflecting needs for special assistance.

In summary, it is reasonable to state that support services such as those described are of interest to part-time as well as full-time students; students

Table 22

Responses of Quarter-Time, Half-Time, Three-Quarter-Time, and Full-Time Students to Importance of Selected Services or Facilities

Item	Proportions of Students by Academic Load Rating Service or Facility as "Very Important"			
	1/4	2/4	3/4	4/4
Access to Student Store for Books and Supplies	59%	57%	78%	67%
Access to Student Activity Center	30	30	38	33
Access to Library or Media Center	65	65	91	75
Access to Places on Campus for Study	44	57	69	65
Help in Getting Financial Aid	34	41	38	54
Help in Finding Temporary Work	41	43	31	42
Help in Finding a Permanent Job	59	48	75	80
Help in Transferring Credit to a 4-Year Institution	45	57	69	57
Help in Improving Basic Skills	54	54	50	55
Help in Learning How to Study	49	48	59	52
Help in Career Planning	55	67	63	75
Help in Planning Program of Studies	58	63	66	71

taking a class or two appear somewhat less likely to feel that the services are important than are full-time students, but others taking slightly less than a full academic load may more frequently (than full-time students) perceive the services as important. It should be noted as well that the student constituencies to which the System is dedicated in its mission include high school dropouts, economically and educationally disadvantaged, racial and ethnic minorities, hard core unemployed, etc. Such students are more likely to have needs for special instructional support, help in finding jobs, and financial assistance for example, than are more conventional students in four-year colleges and universities.

f. Findings and Interpretations from the Site Visits

In the site visits, contacts were made with administrators who must make institutional budget decisions, as well as with individuals whose workload could indeed be driven by numbers of students as opposed to FTE. Several observations are important to note.

First and foremost: many of the instructional support needs of students are sufficiently imperative that they cannot be ignored. The student's registration and payment of fees must be processed; the student requesting special basic skills assistance or help can hardly be turned away. As a result, needs associated with numbers of students for services that the institution must provide (or traditionally provides) to full-time students are or tend to be met for part-time students as well. The impact of these adjustments is variously reflected at any particular institution by a process of choosing among undesirable alternatives which are considered less undesirable (or are simply found possible), and using funds from the less undesirable alternatives to support the necessary non-instructional costs driven by numbers of students. Thus, an institution may not invest in a development officer, may restrain salary increases in a particular sector, may postpone equipment replacement, etc. The result is not so much depriving the institution of administrative and support services that are necessary--the institution must meet these needs--as it is a matter of restrictions elsewhere which vary as a function of programs, markets for part-time faculty, special supplements from local funds, etc. We suspect that the recent budget transfers from instructional to administration and support categories in 1982-83, 1983-84, and 1984-85 (shown in Table 23) were affected not so much in interest in improving administrators' salaries, but by needs to cover necessary administrative and instructional support positions.

Table 23

Funding Transfers in the NC Community College System: Expenditures as a Percent of Allotment

Budget Category	Expenditures as a Percent of Allotment in: 1982-83	1983-84	1984-85
Instructional	81.9	84.5	84.4
Curriculum	84.8	87.7	85.5
ABE Extension	68.4	78.2	72.6
Other Extension	N.A	69.0	83.3
Administrative and Support	121.5	129.7	134.0
Total Formula allotment	94.0	97.7	98.8

SOURCE: Undated Departmental Working Paper.

Second: there may be ramifications in the increasing numbers of students against stable or declining FTEs for instructional costs as well. One president whose institution had experienced a dramatic shift from full-time to largely part-time students noted, for example, that particular courses of interest to full-time or day students had to have additional sections now for evening or Saturday offering, with consequent reduction in class sizes, and less efficient generation of FTEs.

Third: the operation of a more diverse program which is an inevitable consequence of larger numbers of part-time students involves a longer instructional as well as instructional support day. With part-time students more likely to be evening students (because of full-time work or day-time family responsibilities that a working spouse cannot assume), libraries, telephone receptionists, extension directors needing more time to hire part-time faculty, and the like, are also affected.

Finally, we note that the trend to more part-time students--at least for the majority who are in FTE-relevant classes--is entirely in keeping with the traditional mission of the System. Many students involved are enrolled for such purposes as upgrading job skills, or credit toward a degree through needing at the same time to support a family through work. North Carolina has an increasing number of individuals who can only benefit from part-time enrollment, and/or such individuals are applying in increasing numbers. The impact of the FTE as the basic and single component of the allocation formula can only put stress on the effective accomplishment of mission if it does not accommodate, or permit without other sacrifice, this trend.

D. Current Governance, Administration, and Programs in Relation to Effectiveness of Mission Fulfillment

1. Overview

As noted in the introductory section, the governance structure, as the System itself, has been a continuously evolving process. In addressing the question of whether the current System's governance, administration, and programs are effective in fulfilling the System's mission, we are confronted primarily with the mission, as specified in the legislation and administrative code, and the degree to which the new evolving State Board, the Department, and the local boards and administrations are functioning effectively in their own right and in relationship to or interaction with one another. And, of course, the programs actually fielded are not only an interpretation and expression of mission but also a bottom line function of the governance and administrative process.

The several discrete parties with continuing responsibility for the creation, financing, maintenance, and revision of the System are:

- -- The North Carolina General Assembly
- -- The State Board of Community Colleges
- -- The Department of Community Colleges
- -- The Board of Commissioners of the county or counties which constitute the administrative area of the institution
- -- The local boards of trustees
- -- The institution presidents and administration

The basic task requires a determination of what is required by the North Carolina General Assembly of each of the other responsible parties, and then what is actually done, and what appears to be accomplished by those parties. It must also be concerned with the perceptions of each of the parties of their roles and the roles of the other parties, and of any conflicts, or bases for conflicts, in practice. Further, it must be concerned with what is not done that needs to be done, and with what responsibilities and roles are appropriate at each level (or for what parties), as associations between functioning and impacts are noted.

2. Sources of Information

The basic specification of the governance and administrative structure is the current legislation and administrative code pertaining to the North Carolina Community College System. These documents constitute the authority and specify the structures and mechanisms by and through which the System is operated. Accordingly, the analysis of governance, administration, and programs in terms of their effectiveness for assuring mission fulfillment must start here.

Of the new information collected for this study task, the most important came from the structured telephone interviews with the members of the State Board, the chairpersons and one member at random from the local boards of the 12 basic study institutions, and the presidents of those institutions, as described in Section II-G of this report.

Other direct and contextual information was drawn from the discussion with the Department staff (and from working papers prepared for the State Board), with the presidents of the 12 basic study institutions, and with a few other key individuals. Institutional interpretation of mission and appropriate student constituencies was drawn from the Institutional Questionnaire. The student questionnaires, and the focus group discussions with students and with community and business leaders, also contributed to the observations reported on mission, governance, administration, and programs.

3. Findings

a. The State Board

(1) Perceptions of State Board Members About the Role and Functioning of the State Board

The members of the State Board who were contacted were, for the most part, open and articulate; they reflect a variety of depths and kinds of insights, degrees of involvement with Board activity itself, and concerns about aspects of the System, the presidents, and the institutions. Yet, there were some areas of general agreement or strong consensus.

Board members are aware of their legislated authorities; they have done their homework in this regard. They are in strong agreement that their function is to make policy for and operate the System as a system; one put it, "We now have a confederation; we need to make it a federation." They accept and support the legislated role and responsibilities of the local boards, and see a role of delegation of certain powers to these boards (e.g., to select and evaluate the presidents; to interpret local needs; to operate the institution).

Although expressed in various ways, and although there were some who did not volunteer any comments in this regard: there is strong concern about the real strength and power of the Board to manage System affairs vis-a-vis the power of the General Assembly. Stated more precisely, this is not a challenge to the duly constituted authorities of the General Assembly, but a concern to achieve acceptance as a policy body for the administrative and educational affairs of the institutions, and as an advisory body on fiscal needs and priorities to which the General Assembly will be attentive. This concern is expressed in different styles and ways, but is a frequent and overriding theme: viz., "We have somehow to be a strong leader;" "the legislators seem to fear the authority of the Board;" "we're trying to convince the General Assembly that we're knowledgeable;" "the key to running anything is power, and those in power use it; we don't have it;" "we're treated generously, but on their terms;" and "who the hell are we?--It's frustrating." For the most part, these comments appeared to express more a sense of frustration than of hostility or disagreement, and most indicated that a high priority is to improve the credibility and relationships of the Board with the General Assembly.

Perhaps one of the strongest and most pervasive concerns among the Board members are the special appropriations to individual institutions. This tradition is seen as a matter of encouraging the individual institutions to by-pass the Department and State Board, to operate independently, and to present a very basic handicap to the State Board in its capacity to assure that available funds be put to System needs rather than to individual institutional or area interests, or, in effect, that the System can operate as a System rather than as a collection of 58 separate institutions.

The members of the State Board also see a stronger role than has been permitted or attained by that body in determining fiscal priorities for the System. One member said, "We don't need to make a lot of rules; we just need leverage in one or two areas." The Board members are aware of some of the problems: for example, a manufacturer noted that the equipment in his local institution was so far behind the equipment in his plant that training potential was vitiated; many echoed concerns about faculty salary levels. But most of the members feel strongly that the Board must be given or achieve a stronger role in determining needs, assigning priorities, and holding the individual institutions accountable. Another said: "To the degree that there is going to be a State Board - the General Assembly should allow the State Board to make decisions."

One said: "We have budget authorities - but it's a paper tiger kind of authority." In all of these reactions, the prevailing undertone was not power of the Board for the sake of power, but for a chance to operate the System as a system.

There seemed to be less agreement on the role and capability of the Board to function as a Board in these regards. Most agree that the Board has to be stronger, but there is variability in the confidence that this strength can be achieved. Several see the Board operating chiefly as a rubber stamp to recommendations growing out of Department concerns rather than Board concerns: one said, "We don't really do much of importance." Others see the input of the Department, and the Board/Department relationship, as strong and positive. And, at least one concerned member was sufficiently troubled by a growing conviction that the Board would not or could not achieve its proper authority that he was considering resigning from the Board.

The Board members are concerned about their limited interaction with the State Board of Education and the University System Board of Governors, and express constructive interest in better articulation with these authorities on matters of mutual concern.

While there is general uniformity on the perception of the local boards as responsible and capable for the management of the institutions as required by the legislation, the Board members' perceptions of the presidents, separately and collectively, vary. One said, "We have 58 presidents running in 58 different directions." Another said, "One of our problems is that the presidents feel they run the System; our job is to run the 58 - their job is to run their own institution." Others, however, felt more positive, viewing the presidents as valuable sources of experience and advice, with the view that "We need to grant as much autonomy to the presidents as we can."

That the Board is, in its own development, moving in appropriate directions is attested by the belief of many members that their important recent accomplishments include establishing curriculum standards, defining geographic areas of responsibility, intervening in a local situation where governance and administration needed assistance to avoid serious legal problems, and in determining current priorities for assisting local boards in evaluating their presidents or in the articulation of vocational education roles between the community college and the public school systems. There were no instances of disagreement or conflict between the individual board members and the State President. The comments suggest that the Board and State President are in good communication and agreement on System needs and areas of priority for Board action.

(2) Perceptions of the State Board by the Local Board Members

The local board chairman and members reacted with considerable agreement on the role the State Board should play. Key elements in their perceptions are: setting broad policies and providing leadership for the System; developing budget priorities and assuring equity in the distribution of State support; exercising economies (e.g., preventing unnecessary program duplication); representing the System to the General Assembly and informing this body as to needs and opportunities. Although there were occasional disagreements with actions and policies seen as controlled by the Department, there was no conflict with Board responsibilities and actions, either as specified by the legislation or as manifest in Board actions. This extended, significantly, to frequent volunteered comment that the State Board must somehow be a force that would moderate, deter, or eliminate the special allocation process. It was clear that although some of these individuals had had recent special allocation requests approved or were planning to lobby for a special allocation in the near future, there were no dissenting, and many assenting, votes for reducing the purely political elements felt to control special allocations to individual institutions by the General Assembly. The State Board was felt to be the body that must, over the long run, be sensitive to all needs in the System.

One thoughtful board member with considerable integrity and experience stated that the role of the State Board is the achievement of a consensus between the State leadership (i.e., General Assembly; Governor) and the local leadership (e.g., county commissioners, local board, and presidents) by the creation and exercise of judicious and proper guidelines; to interpret to the General Assembly the needs of the constituencies of the institutions and to keep the General Assembly and the public informed as to the accomplishments of the System in this regard; and, to achieve and maintain effective responsibility for the operation of the System by securing the authority to control allocations to the institutions and setting restrictions to curb excesses. This individual also concurred that "special appropriations must give way to the collective judgment of the State Board and its consensus with the presidents."

(3) Perceptions of the Role and Functioning of the State Board by the Institution Presidents

From the Institutional Questionnaires as well as from the site visits, the research team was constantly aware of the considerable variation among the presidents in administrative style and in the focus of concerns outside fiscal needs. The 12 president respondents for the governance task are too few to represent adequately the vigorous and varied viewpoints that are surely extant among the 58 presidents.

Yet, there was generally good agreement among the president respondents on the role of the State Board and its need to be stronger in the exercise of this role. That is, the State Board should set broad policies for the System as a whole; should represent the System needs to the General Assembly and to the general public; should oversee in a general and appropriate way the State President and the Department; and should assure an equitable distribution of State funds. Although cautions were expressed (i.e., one respondent stated that the Board must recognize the difference between administrative and governance actions) there was no conflict with the role of the State Board to represent and provide policy and fiscal management for the System as a whole.

Views were more positive of the Board than of the Department, as might be expected from the fact that the Department is the point of contact between the institution and the application of policy. For example, several presidents stated agreement with the Board responsibility to monitor program quality, but noted that "the bureaucratic extension of this process is extremely burdensome." One was concerned, also, that the Department had vetoed a new program because it considered superfluous an extra time requirement by a professional accreditating organization in one course. The Presidents generally believed that the Department (and Board) should recognize that other competent bodies and criteria for determining quality exist, and incorporate these considerations into their review process.

While seldom was anything said by the presidents in these very private interviews about appropriate role and function that any of the State Board members themselves would take exception to, there were mixed reactions as to the capability of the Board to exercise these roles and functions effectively. For example, one president said: "the Board needs to exercise its budget and program controls, but it is tippy-toeing in using the authority it has."

(4) Summary Observations on the Role of the State Board

We believe it is significant that although there is variation in the confidence that the new Board can effectively set and assure achievement of the basic policies for the System, there is a uniform recognition--by the presidents, the local board members, and the State Board members--of the need for the "federation" of the institutions, for the locus of power and control in one body responsible for the educational operation of the System as a whole. (References to the University System Board of Governors were frequent.) While local autonomies are appreciated by the local boards, and guarded somewhat more zealously by the presidents, all concur that there is strength and ultimate benefit to each institution in the vestment and exercise of responsibility for all institutions in a body responsible for all the institutions. There is the conviction that the System needs should be determined by the Board through its achieving a consensus among the local boards and presidents. But, stronger action by the State Board in determining needs of the System as a whole is perceived not only as beneficial to each institution in the long run, but as a necessity whose time has come.

b. The Local Boards

(1) Perceptions of the Role and Functions of the Local Boards by their Chairmen and Members

All incumbents in the local boards who were contacted were deeply enmeshed in the affairs of their institution and comfortable about the effectiveness of their operation. While they differed in their attitudes toward the Department, and in their confidence that the State Board could provide the leadership needed, these were deeply committed and capable people reflecting, whatever their tenure, the years of tradition of local control, and the necessary exercise of the responsibility for their institution--its president and staff, its buildings, its program, and its constituencies.

They were also, without inconsistencies among themselves, comfortable with a mutually acceptable set of roles and functions. These are: the selection (and monitoring) of the president; the review and approval of budget decisions; the formulation of institutional policy in a context of local needs; particular attention to facility and maintenance needs; the support of their president, and advising him on matters of personnel; keeping the community--its leaders and the general public--aware of the needs, capability, and promise of the institution and its programs; and articulation with the county commissioners, school boards, and local businesses. Although some expressed concerns with the way the boards are now constituted (e.g., too many members; the length of the terms; ineffective members contributed by the appointment system; inability of some who were also school board members to recognize their responsibility to the institution), they have in some ways developed moderate and judicious lobbies to get good new appointees, or have by group process controlled those they consider potentially injurious.

Perhaps as a function of their non-paid status and responsibility, they frequently tend to be more vigorous than their presidents in dissenting with practices by the Department they consider deleterious for their institution. One, for example, used very plain and succinct language in expressing displeasure with quality, capability, and cost of the Prime system that had been "imposed" on his institution; another was frustrated with the Department red tape on a construction project in the planning stage, where no State fiscal support was involved.

But, they were comfortable with their role as prescribed by the statutes; they were knowledgeable in ways that could only facilitate good policy making and oversight of their institution; they were dedicated to the institution and its mission as an extension of their remarkable dedication to their community; and they, too, look to the State Board for System leadership.

(2) Perceptions of the Role and Functioning of the Local Boards by the State Board Members

The State Board members, though with varying experience or association with the local boards, tended to agree strongly with the perceptions of the local board members as to the proper role and functioning of the local boards. The role of the local boards, the State Board members report, is to select and monitor the president, set institutional policies, maintain community support, and handle the institutional matters supported by local funds. They were particularly concerned about exercise of the local boards responsibility to oversee functions required by the General Assembly and the State Board, and the need to be more aggressive in selecting and evaluating presidents. Some expressed concern that local boards were in some instances controlled by their presidents, rather than vice-versa, but nothing in the interviews with the twelve basic study institution trustees suggested that local board members felt this to be a very large possibility. Satisfaction with their presidents was manifest; we feel certain that had this not been so, the members would have been vocal. And, since representatives of all boards and their presidents were not contacted, there are possibilities that situations exist where there are real problems of local board or president functioning. But in our sample, roles and relationships appeared proper and effective.

(3) Perceptions of the Role and Functioning of the Local Boards by the Presidents

The presidents interviewed were also in good agreement with their board members as to their board's proper role and functioning. They are acutely aware that the prime role of the Board is to hire (and fire) the president. They emphasized local policy functions, and value their board's support of their decisions or actions; they see as critically important the board members' involvement in local fund-raising and ambassadorship with the community. The styles of the boards differ somewhat, which appears to be a function of the president's modus operandi and the confidence the board members have in their president, from advising and approving what the president prescribes, to initiating and governing based on the president's input or advice. Yet, the presidents all appeared comfortable with their current boards, though some were occasionally apprehensive about community lethargy or inappropriate new appointees. The majority seemed to be good facilitators of effective functioning, as attested, for example, by the establishment of trustee retreats, by the leading them into long-range planning activity, or by advising them on mobilizing community support. Each party appears to tell the other effectively what they need, and to get this effectively and willingly.

(4) Summary of Local Board Functioning

The local boards appear to be functioning extremely well, from all perspectives, within their legislative mandate and in terms of local responsibilities. They are guided and led by tradition, and the extended history of these boards; they are deeply involved and dedicated; they are aware that their responsibility is to the community, and that their president is the executive officer on whom they must depend. While not as active in seeking interaction with the State Board as are some of the State Board members in seeking interaction with them--perhaps as a function of feeling more secure in their role--they are not hostile to receiving the kind of leadership at the State level that they feel they give their institutions, and appear open in this regard.

c. The Role and Functioning of the Department

The time available and the research strategies employed did not permit a valid assessment of the administrative functioning of the Department and State President. Accordingly, what will be reported is the very general nature of comments and experiences volunteered by the institutional representatives who interact with the Department in various ways.

It is fair to say that the pervasive perceptions of Departmental effectiveness--by individuals or by the administrators of individual institutions as a whole--vary considerably. Complaints or negative attitudes, when they exist, are usually based on some particular problem or distress for the respondent where Departmental procedures or rulings has caused him or her some grief. And, it is clear that the institutions have enjoyed considerable autonomy and cherish this independence. But, in the field, the reaction ranges from positive regard, respect, and compliance to perceptions that if given adequate money and being left alone, the institution could be more successful and life much easier. This is no different than what would be found in most educational systems operating under a similar administrative structure.

At the institutional level, however, there is a strong feeling--the plausibility of which is hard to refute--that the closer and more intimate the contact with the community and the students, the better the perception of their needs. Sometimes the Department is seen as remote and isolated from this front-line experience. This feeling was more frequently expressed in a positive sense than in a negative sense: e.g., "The State President has visited us and met with our board," or "Dr. X went to the Department from our campus, and he knows what we're facing." But of the several concerns most frequently volunteered, one had to do with the lack of on-site experience of many Departmental staff with local institutions. One president felt that a prospective exchange program, where a departmental staff member would assume on-campus responsibilities for a time (and vice-versa) would have tremendous benefits.

However, there seemed to be a conviction that the Department was more responsible and tuned to the General Assembly than to the institutions, that if there were differences they would emerge as between the institution versus the Department and the General Assembly as opposed to between the institution and the Department versus the General Assembly. Some observers can with reason say this is as it should be (and some of our respondents so noted). But the impact for the research team was the conviction that institution-department differences would be less traumatic if each side better understood the problems and perspectives of the other. As the Department has grown, and as it has taken on new functions, it is only to be expected that apprehension or distress can be triggered by those who have operated without first-hand local campus involvement. As noted variously elsewhere, the time seems ripe from all perspectives for the displacement of a collection of individual institutions by a true system of institutions, with common general goals but with tolerance for diversities that exist for good and sufficient reason.

A second common concern is with paperwork requirements and burden, or with "red tape" and delays. This too is not uncommon in other systems, but the need for the institutions to understand and accept the need as reasonable, rather than merely inevitable, is apparent, as is the need for the Department to be sensitive to paperwork demands. Much could be accomplished, for example, by more two-party involvement in considering how curriculum standards can be expressed, and monitored and enforced - or by research reports directed not only to the public record but to needs and interests of the institutions.

These observations are not reported--nor were they made to us--as any sweeping criticism of the Department. The press is for a strong Department that will facilitate the accomplishment of the important aspects of mission of the individual institutions, and curb the occasional excesses of one party before it causes grief for all parties involved.

d. The Functioning of the Presidents

The presidents--in our personal contacts, and as revealed in their responses to the Institutional Questionnaire--are an exceedingly diverse group in many ways--in training and experience in educational administration, in particular capabilities and interests, in management style, and in characteristic problem solution strategies. Yet, we were impressed by the integrity of their dedication to their institution and their community, and their selfless and consuming devotion to their boards, faculty, staff, and communities and students. We feel that their focus is on the exercise and intensification of their mission as mandated, rather than on empire, growth for growth's sake, or becoming a different kind of college from that prescribed by the vocational and technical emphasis of their mission. We believe that this in turn is a function of the viability of the enterprise itself: of students who come for a purpose, of young people and older people coming naturally together and exchanging insights and experiences in the common pursuit of a personal goal, of the recognizable value of the skills learned or of the broader perspectives of problems gained, of the inevitable screening out of faculty who cannot generate sufficient FTEs or who cannot stand muster in this more pragmatic setting, and of the positive response of the employers of the students to what the institutions have been able to put together. One has only to talk with faculty and students, and with consumers, to recognize that what may have started as simple pride that "our community now has its own college" has been dramatically replaced by a rewarding involvement in enterprise that is effective in meeting, through training and education, needs for human growth and development that pay off for the community and the State as well as for the individual.

Thus: though we can understand perceptions of the presidents as "fifty-eight individuals running in 58 different directions" or as including individuals who try various ways to "beat the system," we cannot but give them collectively--and the structure which has facilitated what they have developed--a vote of confidence. There seems to be a marked difference between the way they are viewed on their home turf and the way they are viewed in Raleigh, where the occasional sins or failures of one may too easily be generalized to all.

e. The Accomplishment of Mission as Determined by Perceptions of Students and Business and Community Leaders

(1) Student Appraisals

Two forms of soliciting student reaction and experience were employed: the questionnaire administered to a sample of 760 students at the 12 basic study institutions, but representing the various programs in the System; and focus group interviews with students during the site visits.

The students responding to the questionnaire were selected by membership in a class corresponding to sample specifications to produce a total which would be representative of System program mix; they may or may not be representative of other important student characteristics.

The male-female composition was 44 and 56 percent respectively. Forty-eight percent were below 25 years of age; 24 percent were in the 25-32 year old range; and 28 percent were over 32. Forty-eight percent were primarily interested in learning or developing new job skills, 24 percent for self-improvement, 17 percent for credit towards a four-year college degree, and 11 percent for improving current job skills or on the recommendation of their supervisor. Forty percent were married and living with their spouse, 36.5 percent were single and living with parents, 15 percent were single and independent, and 8.5 percent were divorced, widowed, or separated. Eleven percent had a 4-year college degree or higher; 25 percent, some credit but not a degree from another college; 55 percent, a high school diploma; and 9 percent had not graduated from high school. They reported their personal (or self and spouse or family income, if appropriate) as follows: below $10,000 per year, 22 percent; $10,000-$15,000 per year, 16 percent; between $15,000 and $20,000 per year, 14 percent; between $20,000 and $40,000, 35 percent; and, over $40,000, 13 percent.

Three questions relevant to the concerns of this task were asked. The first was a ranking of the importance of various considerations in their decision to enroll at their institution. Their responses are given in Table 24.

Thus: availability of courses or programs of interest, low cost, nearness to work or residence, the reputation of the school for vocational or industrial training, and the conviction they could handle the work, were rated as "very important" factors by the majority of respondents. This appears to the research team to attest that System mission and reasons for involvement by the students are in good agreement.

The second task-relevant question was their rating of the institution on selected qualities. The third question had to do with the availability of needed services. Their responses to those questions are given in Tables 25 and 26.

For both of these questions, it is hardly proper to generalize to the System as a whole; 12 groups of different kinds of students were rating twelve institutions. But the responses are informative.

Most impressive were the students reactions to individual attention by faculty and staff. Seventy percent or more stated that special help from instructors outside of class, help in program planning, help in improving basic skills, and help in planning a career or learning about job opportunities, were readily available.

The group discussions with students during the site visits echoed and extended the questionnaire data, with attractiveness of programs, costs, nearness to home, and special help frequently cited. Students also noted the positive aspects of the opportunity of testing oneself to determine if a field was appropriate or if they wanted to pursue a four-year degree. Several who had started at a 4-year institution expressed satisfaction with the more reasonable pace of work, and the personal attention they now received. Most commented on the friendly and personal atmosphere generally offered (one student said "the faculty here gives a damn!"), and valued the association with students of different ages and perspectives in their classes. They were comfortable with the quality of their instruction.

Table 24

Reasons Given by Students for their Decision to Enroll

Reason	Proportion Rating Reason as Very Important	Somewhat Important	Not Very Important
1. Availability of courses or programs of interest to me	87.9%	10.9%	1.2%
2. Low cost of education	68.4	25.1	6.4
3. Nearness to where I live or work	62.6	27.3	10.2
4. Ability to transfer credit to a 4-year college or university	42.8	29.9	27.3
5. Reputation of school for vocational or industrial training	58.0	31.6	10.4
6. Recommended or required by my employer	19.5	23.8	56.7
7. Recommended by a teacher or guidance counselor	22.6	31.6	45.8
8. Had friends who were enrolled here	18.8	30.6	50.6
9. Was made to feel "wanted" by the institution	44.1	38.0	17.9
10. Felt I could handle the work	67.6	26.5	5.9

Table 25

Student Evaluations of Selected Qualities of the Institution

	Excellent	Good	Fair	Poor
1. Ability of instructors to teach	58.1%	36.6%	5.2%	0.1%
2. Instructors' knowledge of subject matter	63.1	33.5	3.3	0.1
3. Instructors' interest in students	57.1	33.6	8.6	0.7
4. Convenience of time when classes are offered	40.1	42.1	14.3	3.5
5. Efficiency of registration procedures	46.0	38.2	14.0	1.8
6. Comfort of classroom or shop space	41.6	39.5	16.0	2.9
7. Condition and appropriateness of equipment used in class	40.9	44.7	11.8	2.5
8. Affordability and reasonableness of costs	57.2	32.1	9.4	1.2
9. Quality of student services	41.6	46.5	10.6	1.3
10. Reputation of the school in the community	62.1	32.2	5.2	0.5

Table 26

Students Perception of Availability of Needed Services

	Readily Available	Available, Needs Improvement	Not Available
1. Food services	59.6%	34.3%	6.1%
2. Social and recreational facilities	45.7	44.5	9.8
3. Places on campus to study	75.0	23.0	2.0
4. Public transportation services	35.8	25.1	39.0
5. Parking facilities	64.0	34.3	1.7
6. Special help from instructors outside of class	70.7	25.4	3.9
7. Help in getting financial aid or work to support my costs	65.6	28.0	6.4
8. Help in planning program of study	70.9	25.3	3.8
9. Help in improving basic skills (reading, writing, computational skills) or study skills	80.6	16.1	3.3
10. Help with planning a career or learning about job opportunities	73.7	23.5	2.8
11. Help on personal problems not already listed	51.6	29.5	19.0

They were, however, frequently concerned with some critical matters. Beyond the essential and expected issues of food service and availability of recreational facilities, some were concerned with inoperable training equipment requiring that enrolled students take turns on that available, or insufficient work stations, or having out-of-date equipment. Some were concerned that small numbers of students meant intermittent course offering requiring an unexpected wait until next term, or availability of a necessary course only at an inconvenient day or evening time. The part-time students were also vocal about needing access to library or other services in the evening and on weekends.

The discussions with the high school seniors, though producing no surprises, confirmed that the extant image they have conforms with mission. They are attracted by good technical and vocational programs, low costs, ability to transfer courses if they go elsewhere, closeness to home, the ease of entry, the report of good instructors, and the reputation of the institution and the fact it is a part of their community. Several in one area felt better that the local institution was now a "Technical College" instead of a "Technical Institute."

(2) Appraisals by Community and Business Leaders

As community and business leaders with whom group discussions were held were selected and invited by the presidents, it is a safe assumption that local critics, if they existed, were not likely to be included. Nevertheless, the nature of their positive view--the reasons they gave--are significant. The responses fall in three categories: responsiveness of institution to their needs, quality of training and equipment used, and relevance of basic skills.

Although the groups occasionally contained a local board member or otherwise consisted of satisfied customers, the institutions were rated as particularly responsive to their needs, and competent in meeting them. Good people, who know their subject matter and how to train effectively, were available through the institution. Respondents believed that the faculty and staff spent the needed time to understand the particular requirements of the employees, many of whom had developed policies of time off, tuition payment, or travel allowances for employees (one foreman noted "even the [part-time extension] instructor doesn't get travel costs). Also notable in several instances was the report of a representative of a major new industry that they were attracted to that location by the availability of the labor force and the capability of the institution to transform that labor force into the skilled specialties they need. Among the only complaints were occasional observations about currency of equipment, where training might have to be moved on site. The consensus was that the schools provide a valuable and needed service, at better quality and lower cost than the businesses or industries could achieve. Another complaint was about the austerity of the extension budget for occupational courses, which was seen as a larger deterrant to new and needed courses than was any institutional lack of interest.

The respondents were also unanimous on the relevance and value of basic skills training. The evidence submitted almost always involved job descriptions where technical skill was not enough - and with no job relevant to vocational, technical, or occupational programs mentioned where this was not the case. Comments were strongest in areas with high illiteracy rates or low proportions of adults with high school diplomas. Although many of the respondents would naturally have been concerned about low labor costs, no one cared to decry the importance of being able to communicate in speaking or in writing of reading and understanding, of arithmetic skills or handling mathematical concepts involved.

f. A Concluding Observation

The most significant observation--that the North Carolina Community College System is working exceptionally well--should be placed in a context with the uniqueness of the structure when compared with that in other states. The tradition of community involvement and local control is both alive and well. The larger context of the legislative mandates, state fiscal support, and system governance by the State Board, recognize the potential impact on the State's economic development; the structure established enhances the necessary mechanisms of local control in the achievement of the broader objectives. The bottom line is a rather remarkable coming together of a cross-section of the community population, where individuals of different kinds find, in their common purpose in enrolling, much to give one another. Instruction is also sensitive and purposeful. All elements in the structure are synergistic, and the total impact on the quality of life in the State, though immeasurable, is substantial.

E. Conversion of Technical Institutes or Colleges to Community College Status

1. Overview

The matter of conversion of technical institutes or technical colleges to community college status is one that has been vigorously and variously debated since 1963 when the distinction was established by the original legislation and, we suspect, will be for some time to come because of the complexity of the issues. Carefully developed arguments in the past, such as the Sanford Report (which recommended in 1981 that all public two-year institutions in North Carolina be changed to community colleges) have not been accepted; the special hurdles requiring approval above the level of the State Board remain firmly in place with only one institution converting since 1979.

Yet, the stirring in the ranks continues. A recent (but undated) position paper of the North Carolina Community Colleges Presidents' Association on "Community College Status" notes that all System institutions, whether community college or technical institute, "now provide opportunities for two years of collegiate study which are transferrable towards the bachelor's degree at many of the state's senior institutions," and concludes that the "association of transferrability with community college is based upon a historical precedent which is no longer accurate or useful." This paper also notes that the System's regional accrediting agency requires that 25 percent of work required for an associate degree in applied science (the degree offered by the technical institutes and colleges) "be comprised of course work which duplicates many of the freshmen and sophomore courses in a college of arts and sciences." Also noted is the continuing decline of the proportion of curriculum students enrolled in college transfer programs (data on the most recent year reported in Table 1, Section I, of this report shows only 7.1 percent of the 1984-85 FTE System enrollment to be in the College Transfer program). The Presidents' Association paper concluded:

> We recommend that the present requirement that only institutions offering associate degrees in the arts, fine arts, and the sciences be designated a "community college" be eliminated. Recognizing the acceptance of the associate of applied science degree as a transferrable degree, the growing number of contractual agreements by technical colleges and technical institutes with senior institutions, and the need to ensure a broader offering of educational opportunities to the people of the State, we recommend that all institutions within the NCCCS be uniformly designated as "community colleges."

The complexity of the issues, and the fact that the stand-offs between opponents and proponents are based on different issues that are difficult to reconcile with one another (that is, each side may have tended to look at one set of issues not seen as important by the other side), behoove us in addressing this task to identify the issues and to look as carefully as possible at them, toward interpreting from the apparent perspectives of both the proponents and opponents (as well as from our own) what validity each may have. Taking two or three of the issues and conducting the research that may illuminate those issues will not resolve the larger question, for the resolution is probably a matter of values and what the State may be willing to spend to obtain those values.

In addressing this task, we have attempted first to inventory the issues - from the general literature, from working papers for the Department or other groups (such as the position paper just cited), from several current applications (filed or holding) for conversion to community college status, and from the Institutional Questionnaires. Second, we have examined some System and institutional data of record for the 10 institutions converting to community college status in 1969 or later. Finally, some comments and data from the Institutional Questionnaires seems relevant, if judiciously interpreted, and this information is also summarized where appropriate.

2. Presumed Higher Status of the Community College

An issue that is most frequently believed to be involved has to do with the perception, by the institution staff and boards or by the general public, that the community college has higher academic status than the technical institute or college, and hence is a more attractive and somehow more legitimate higher education enterprise. Of the 31 technical institutes or colleges responding to the institutional questionnaire, 12 (or 39 percent) specifically cited this as an advantage, although only 3 or 13% of the 23 community colleges responding did so. This is more frequently couched in terms of its value in attracting students, or in contributing to the confidence of the current students that their academic work is of high quality. We note that the conversations with students and prospective students elsewhere tended to confirm that the term "technical college" is perceived more positively by students than "technical institute," and that "community college" is a term perceived even more positively.

A related issue, frequently expressed by representatives of the technical institutes or colleges (and found in direct conversation with some community college officials in the site visits), is a concern about a two-class system. Given the distinction, and the review and approval process required to upgrade, may help explain why the general public somehow sees the technical institute or college as inferior to the community college. This concern seemed to be in the operation of the RTI principal investigator, in no way as strong as it was in the first seven or eight years of the System, which was when conversion was more frequent, a period when all "colleges" in the University System became "universities," and when (perhaps) the Community College System institutions were less secure and practiced their vocational/ technical mission.

3. Educational Access and Opportunity

A more substantive issue is that of educational access and opportunity for those who cannot afford to go to a four-year institution, or who are ill-prepared and therefore appropriate for the more specialized remediation that the System institutions can provide. Two assumptions are germaine here: first, that the availability of an accessible public two-year institution attracts individuals that would not choose to go elsewhere; and second, that such students either go on to four year institutions, or become more marketable as well as more literate than would otherwise have been the case.

In regard to the first point, all evidence suggests that most of those in college transfer programs would not have entered other options. This evidence is drawn from such data as the age distribution figures for the System, which suggest that for older persons, especially housewives or divorcees with children, the local community college is accessible; we also note the numbers of students who work full or part-time. The transfer of senior college students into the system, now known generally to be almost as frequent as transfers the other way (and our conversations with such students) attest to the more reasonable pace for them that is provided in the personal and caring atmospheres of the public two-year institutions. It is also clear that many entering students are apprehensive about their readiness for work at a senior institution. Most important of all, perhaps, is the affordability attested by cost differentials, against other options, and the fact that one can live at home.

With regard to the second element (that college transfer students do continue their education in four-year institutions), the institutional questionnaire asked the institutions to report the numbers of curriculum students known (or estimated) to continue their education in a four-year college. For the community colleges, 13 reported estimates averaging 22.9 percent of their total curriculum enrollment, and 8 reported evidences from follow-up studies averaging 25.5 percent of their total curriculum enrollment. For the technical institutions, 16 provided estimates which averaged 7.7 percent, and 12 institutions with recent follow-up studies reported data averaging 11.7 percent of the total curriculum enrollment. These estimates of the proportions of curriculum students who continue their education elsewhere are more likely conservative than optimistic, because some students may "stop out" for several years following work in the two-year institution. It is clear that the institutions are providing a college transfer potential that is significant, but not overwhelming the other functions.

4. Competition for Students with 4-Year Colleges

A twist to the improved access issue is the perception that adding more community colleges would have an adverse effect on enrollment in public and/or private colleges in the area. This may be of particular concern to the private colleges that have sustained enrollment declines. A Department working paper of 3/17/83 examined enrollment trends between 1967 and 1981 in North Carolina counties without colleges, in counties with both community colleges and other public and/or private colleges, and in counties with community colleges only. This report, which should be examined in its entirety, properly concluded:

> It appears that the community college has had very little, if any, adverse impact on enrollment in other sectors--private and public senior colleges. Rather, the effect of adding college transfer programs appears to have resulted in increased college participation. This may be due to the fact that community colleges attract students who are older, less prepared, and have fewer dollars to go to college.
>
> The addition of college transfer programs and converting technical colleges to community colleges is a mission issue and a matter of priority. Based upon the college participation data, it appears that adding more college transfer programs would increase college participation and have little impact on either private or public senior college participation.

We note also that the increase in enrollment in the System is in part-time--mostly quarter-time--students, who are likely to be community bound at the moment because of work or other situations.

From this evidence, as well as from our own perceptions of the community college clientele, we suspect that the reverse of the assumption in the basic issue is true--that is, the college transfer programs serve a unique recruiting function for the four-year institutions, as well as a remedial function that may improve persistence of those transferring into four-year colleges. The threat appears to be more an apprehension than a reality, and the larger issue is one of reduced access in areas where no community college exists within reasonable driving distance. That this opportunity and higher educational access is real and is unique is suggested not only by the increases in total curriculum enrollment that the converting institute almost always experiences (see Table 27 for relevant data on the conversions since 1968), but also that enrollment in other area four-year institutions does not seem to suffer.

5. Effect of Conversion on the Occupational Emphasis of the Institutions

An issue of considerable import is the concern that conversion to community college status would threaten the exercise of the more traditional vocational and technical mission. Evidence to the contrary is reflected not only by particular advantages cited by many of the institutions that have converted, but by enrollment data on those institutions that have converted since 1968. This is presented in Table 27.

The burden of this information is that rather than detract from vocational and technical programs, the provision of a college transfer program has had no deleterious impact on the FTE enrollment in any of the vocational programs three years later. Only one of the nine institutions sustained any significant decreases in the technical program over that period (while one increased its technical FTE enrollment by 161.8 percent!). Although the total system enrollment was variously increasing over the period covered (1969-1981), the average increases are generally above those for the System as a whole for the periods covered.

6. The Belief that a College Transfer Program Would Strengthen the Quality of Education for Vocational-Technical Program Students

Related to the issue of potential deleterious impact on mission is an issue that would suggest the opposite: that is, the belief that availability

Table 27

Percent Increase or Decrease, in the Third Year of Conversion in FTE Enrollment in Technical and Vocational Programs, and in Total Curriculum Enrollment: Institutions Converting to Community Colleges After 1968

			Institutional FTE Percent Increase or Decrease, Year 3 from Year 1, in:			System FTE Percent Increase or Decrease, Year 3 from Year 1		
Institution	Year of Conversion	Base Year Total Curriculum FTE Enrollment	Technical Program	Vocational Program	All Curriculum Programs	Technical Program	Vocational Program	All Curriculum Programs
Beaufort County CC	1979	814	-3.1%	+2.5%	+3.3%	+13.2%	+5.3%	+10.3%
Caldwell CC & TI	1970	350	+52.6%	+14.0%	+60.0%	+30.5%	+30.2%	+25.4%
Coastal Carolina CC	1969	537	+45.9%	+15.3%	+41.3%	+46.0%	+41.2%	+44.1%
Craven CC	1972	524	+161.8%	+34.1%	+95.2%	+52.4%	+28.8%	+43.3%
Guilford TCC	1983	3010	(Not Available)			(Not Available)		
Halifax CC	1976	698	+16.8%	+21.6%	+24.9%	+3.4%	+10.5%	+4.8%
Martin CC	1976	472	-18.5%	+29.0%	+3.4%	+3.4%	+10.5%	+4.8%
Pitt CC	1979	1647	+18.9%	+8.2%	+21.7%	+13.2%	+5.3%	+10.3%
Tri-County CC	1978	458	+10.6%	+19.4%	+20.5%	+11.9%	+4.5%	+8.2%
Vance Granville CC	1976	733	-01.1%	+63.3%	+23.6%	+3.4%	+10.5%	+4.8%
	Mean Increases*		+20.2%	+20.1%	+28.5%	(Not Relevant)		

* The mean increase is an index based on the change, in total numbers of students in the institutions and program categories named, between the base year and the second of the two following years.

Source: Enrollment records maintained by the Department of Community Colleges.

of a college transfer program would strengthen the general education for those in the technical and vocational programs, by providing options for substantive courses in the basic skills, and in the liberal arts and sciences, that would contribute to the overall education and cultural level of those in the vocational and technical programs. While in the past some business or industrial leaders may have been concerned with access to a cheap labor force, and feared the higher salaries that a more literate group might demand, the business leaders we interviewed were unanimous in the value they placed on more literate technical employees. In their case, this was a matter of specific work demands they cited, not a mere expression of the right of each individual to proceed as far as ability and interests would take him or her. The community colleges responding to the institutional questionnaire, in particular, noted their college transfer program added to the salability of their vocational/technical students: e.g., "More and more are calling for students with a good basic higher education," or "our area businesses and industries encourage their employees to take college credit courses."

7. Liberal Education for All

A similar concern to that just cited is the broader issue of the availability of general education in areas that thinking people value, for those who have an interest in self-improvement. There are many, given the overall education level of the State's population, who are not interested in pursuing a degree, but who may be interested in, and whose lives would be enriched by, courses in history, literature, the arts, and other components that constitute college parallel work. That this is available through the general education course helps, but the formal college transfer programs, where offered, provide more options.

8. Transferrability of Credit

In contacts at all levels - with State and local board members, presidents, students, etc. - examples were cited of the absurdity of courses of equal quality being generally acceptable only if the transcript carried the community college label. A number noted a nursing program with classes offered by a consortium of technical and community colleges, but where only the community college students were given transfer credit by a particular senior institution. This situation was not verified, but it does make a point. We note, however, that on the other side only seven of the total group of 53 institutions responding to the institutional questionnaire reported no formal or contractual agreements with one or more senior institutions to award transfer credit for general education, vocational, or technical programs. Acceptance of prior work for credit by senior institutions is generally known to vary from institution to institution and, to some extent, from time to time, but it would seem from the number and date of contractual relationships the institutions have with senior institutions that senior institutions are more frequently crediting technical institute or college students for work taken in that setting.

9. Assumption of Lower Academic Quality of College Transfer Work in Community Colleges

A concern voiced by some academicians in the four-year colleges and universities - or by their graduates - has to do with the assumption that liberal higher education involves certain qualitative aspects (traditionally reflected by faculty credentials, library holdings, selectivity in admissions, academic rigor, etc.) that are necessarily limited in the public two-year setting, and that true college level work is not possible at this level without basic changes in the structure of requirements, staff, and facilities. This is a different issue to resolve. It is true that, in the University System for example, what is remedial at one institution may be honors work at another, and that the higher education community has generally responded to the overall population needs by providing a diversity of levels of opportunity. Our overall society not only tolerates but also demands that colleges and universities vary in both programs and levels. While the research team is concerned with the response of some System presidents that college transfer programs are less expensive than technical programs, because, among other things, "we can pick up inexpensive faculty from the public schools," we also note the significant accomplishments of the System, including the production of several of its most capable presidents and senior administrators, and the fact that all institutions are accredited by the regional accrediting agency (which is where internal efforts at quality receive outside scrutiny and ultimate approval). We note further that in the years since 1963 the System institutions, through the open-door mandate placed against the requirement which all good teachers hold that their students do grow significantly in their areas of concern, have probably been successful in getting students ready for continued work in other colleges and universities. While we believe the State and local boards should concern themselves with the nature and costs of good college transfer work, we cannot believe that this area should be generally placed off-limits solely because of the conviction that appropriate quality can only be available in other settings dedicated entirely to work leading to baccalaureate or higher degrees.

10. Other Intrinsic Values for the Institution

The responses of the institutions on the Institutional Questionnaire suggest that they believe that conversion brings other benefits of intrinsic value to the institution. These are varied, and some probably constitute legitimate bases for improved status. For example, a number of institutions noted that, in addition to permitting service to new markets, conversion involves new markets that contain prospective students who are more academically motivated than their current markets. As a consequence, program offerings and options would be broader and richer, faculty "depth" would be increased, libraries would be improved in important ways, and accreditation of all programs would be easier to maintain. Some institutions also noted that the new student markets would generate new fiscal support or equalize an important inequality in State funding across the institutions that now exists.

11. Costs to the State

We have reserved until last the issue that probably has been and will be the most critical factor in the ultimate resolution of the issue. That is, the fact that the addition of college transfer programs may generate significant new support needs and demands on the State budget.

In a September 4, 1985 memorandum to the Department's Policy Council, Dr. Sanford Shugart of the Department has addressed the issue of the additional cost of permitting all 34 technical institutions "to change their names to community college and, on a local option basis and with adequate demonstration of need, seek approval to add the college transfer curriculum program." Under a "worst case" assumption (from the point of view of those concerned with State budget) that the minimum enrollment standards of the N.C. Administrative Code (NCAC Title 23, Chapter 2 C.0105(c)) would be precisely met for first and second year numbers (132 FTE students during the first year, and 220 in subsequent years), assuming the 1985-86 funding allotment ($2,250.95) per FTE, and assuming that no general education students now served would switch to this program (and most probably would), Shugart reports that the cost per institution would be about $297,000 for the first year and about $495,000 for the second year. Assuming further that all 34 technical institutions chose to apply at once and won approval, the first year cost for the System would be $10,102,264 and the second year $16,837,106. This, Shugart notes, constitutes an extreme upper limit for estimated costs.

Under a different set of "worst case" assumptions--that all 34 will convert in the same year, that the 1985-86 FTE funding allocations cited will apply, that occupational enrollment levels will remain constant (our review reported earlier suggests occupational levels are likely to increase), and that the 34 institutions will show the same pattern of increase in numbers of college transfer program students minus numbers in general education that was exhibited by the last seven institutions to convert--Shugart estimates that the additional cost would reach $15,563,068 the third year, representing approximately a 5 percent increase in the total operating budget for the System. Again, this estimate sets an extreme upper limit, for we note that some institutions saw the principal hurdles to be at the local, not State levels, and that privately some senior representatives of the institutions stated, flat out, that vocational and technical education was what their institution did best, and that they would not choose to convert.

Without taking sides on this question at this point, we note the fact that not all institutions now would convert unless this was mandated and supported at the State level (i.e., by the General Assembly) and agreed to by the county commissioners. The larger issue remains: adding the college transfer program to all or some technical institutions will inevitably generate additional costs to the state, though we believe this cost will be well below the worst case estimates of the Department. Even if the decision were made to allow all technical institutions to convert, time would be required for planning (applications should outline courses to be offered, faculty to be involved, etc. in addition to "making the case" and presenting cost estimates), and schedules could be set by the proper State authority for phasing in the new programs consistent with other budget decisions. The decision, for the State Board and the General Assembly, is one of how much value will be added to the people and the economy of the State by additional college transfer programs, and how much the State is willing to spend to obtain that value. It is this issue that will ultimately decide the matter.

Before closing this subsection, we note an important concern of some of the community college respondents to the institutional questionnaire: that is, that the conversion of nearby technical institutions would probably reduce enrollment in their college transfer programs. If this concern is well-founded, and it may be in some areas of the State, the suggestion is that the interest and concern of one area constituency in having its own community college must be considered in terms of whether sufficient state investment is already being made elsewhere, given the costs of the program. Still another concern that we draw from disadvantages noted by students, in small institutions, in the college transfer program: normal attrition may reduce second-year class sizes to levels that mean costs of providing these classes have to be drawn from support otherwise invested in other instructional program areas, or that two-year programs stretch, for the full-time students, to three years' duration because of the institution's need to wait for sufficient enrollment potential to offer later classes.

F. Tuition for College Transfer Courses

1. Overview

The final task under the contract was to determine "whether tuition for college transfer courses should be comparable to tuition charged by the constituent institutions of the University of North Carolina."

Immediately, the issue invokes several kinds of considerations. First, an increase in cost has revenue implications, which can be estimated by multiplying the increase from tuition charges times the numbers of credit hours, on which tuition charges are based, for registrations expected to be "sold" at the new cost. Second, and implied by the element of how many of the current or conventional students would register at the increased cost, there is the issue of credibilty and acceptance by the general public. Third, since college transfer courses, as general education courses, frequently form important components of occupational programs, there is a need to consider how charging would be managed. Fourth, there is the matter of equity--to individuals and to institutions. Is it fair for the State to provide lower cost college work only to those in commuting distance of a community college, and not to others? Is it fair to the State's senior institutions to undercut, at

State direction, their charges? Finally, what are the implications for access to the System and for its mission, and for impact on the System institutions?

These are questions primarily for careful and judicious speculation, with the last issue cited--probable impact on access and mission--of overriding importance. That issue will be addressed first.

2. Implications of College Transfer Tuition Increase to Mission and Access

The current cost to an in-state student for general education or college transfer courses in the Community College System is $4.25 per credit hour, or $51 for students taking 12 or more hours (which is considered full-time); the tuition rate is set by the General Assembly. Thus, a full-time student in a college transfer program in the Community College System would be charged $153.00 per academic year of three quarters. Other significant costs are textbooks, which will average upward from about $300 per year; fees, about $50 per year, and transportation costs. Assuming a conservative $0.20 per mile for driving, an average round trip of 20 miles, and attendance five days a week for three 11-week terms, the transportation cost would be $660 per year. Thus the college transfer student in the Community College System sustains costs directly associated with college attendance of about $1163 per academic year.

An in-state student in a baccalaureate institution in the University system, enrolled full-time for an academic year, would currently sustain tuition charges of $350.00 per academic year. For the research universities, comparable tuition charges are $480, and for a middle range of institutions the comparable tuition charges are $410. In-state annual tuition at the N.C. School of the Arts is $732. To these tuition charges are added (institutional) fees, which are usually in the neighborhood of $300 per year.

If tuition for college transfer work were charged at the lowest University system rates, these costs for the full-time college transfer student would increase from about $1163 per year to about $1360 per year.

In our sample of students, about 40 percent report personal or family incomes of $15,000 per year or less; for the college transfer students, the proportion would probably be equivalent or greater. We suspect that increase of tuition to the lowest University System level would place an additional burden on about half of the current students.

The institutional questionnaire asked the respondents to indicate whether tuition charges should be increased for college transfer, general education, technical, vocational, and continuing education qualifying for FTE; only four institutions responded in the affirmative for college transfer courses, and three of these were institutions that felt tuition should be raised in all instances (one institution of the four recommended continuing present tuition charges for technical and vocational program courses). In the site visits, the unanimous reaction to the basic question was that increasing college transfer tuition to University system charges would inevitably and effectively close out the program, because a sufficient number of students of the kinds now served could not afford it. We also noted that even if the institutional representatives' assumptions are not correct, class sizes could still in some instances drop to the point where it would no longer be feasible for the institution to offer the program.

We suspect that the institutional reaction to the question is not one of whether or not the college transfer programs could be continued, but a matter of challenge to the very foundation of the principle, deeply embedded in the System from the beginning, of making all programs offered within the means of those who cannot afford other options. These are the minorities, the workers displaced by technological advance or seeking to upgrade skills, the divorcees, the families for whom upward mobility through higher education for a chance to satisfy inner hungers for learning, knowing, and thinking, for whom this opportunity would be made more difficult.

3. Increase of College Transfer Tuition to University System Levels, and Fairness to Individuals and Institutions

Charging tuition at University System levels could, as noted in the prior subsection, prevent some students from entering college transfer programs, thus discriminating against these individuals. This discrimination now exists, however, for those in areas where the State has not provided a college transfer program. Removal of this factor would thus put all prospective aspirants on an equal basis, but the equality would be an equality of handicap, not an equality of advantage.

It is also germaine to look at the prospect of charging tuition at University System rates from the standpoint of fairness and equity for the institutions. By offering college-level work in one kind of State institution at lower prices when compared with the prices in the State's senior institutions, are we taking enrollment away from the senior institutions? Is it fair for them to be undercut by the legislative authority responsible for the other system as well as for them?

This matter becomes more complex when the per-student support by the State is taken into consideration. Without attempting to provide statistical detail, we hold simply that per-student support is already substantially higher for University System institutions--and is determined on different ground rules and allocation procedures. The larger issue becomes: would it be fair to remove inequities between the two classes of institutions in tuition charges, thus making them seem equal options for prospective students (or, more precisely, for that portion of the prospective students who qualify for university system admission, who do not have to live at home, and who would feel comfortable in the college or university system climate), while not supporting the two classes of institutions at equivalent levels or while using different allocation formulas and procedures? This is a matter, of course, for the General Assembly to decide.

4. Implications of College Transfer Tuition Increase for the Operational Procedures of the Institution

Should the tuition charge implied by the basic proposition be put into effect, there would be some difficult decisions that would need to be made about charging policy and practices. The alternative of the higher tuition charges for all students enrolled in a college transfer course would discriminate against and deter to some extent those occupational program students from enrolling in these courses. There would also be some impact on accreditation requirements as well as on the concept that such courses are relevant to or necessary for those pursuing solely technical or vocational goals. If fewer vocational or technical students enrolled in college transfer courses, the quality of the occupational programs would, by academic standards now generally accepted, be reduced.

On the other hand, charging students not on the basis of the course in which they enroll but on the basis of their programmatic purpose would, as one registrar stated, create an administrative nightmare in assessing proper tuition charges, as well as present to the college transfer student some evidence that he or she is, through the higher tuition charges, subsidizing in part the costs for the occupational students. Differential charging in terms of programmatic purpose would also press students who are interested in college parallel work to declare themselves as occupational students. In accepting transfer credit, senior institutions are concerned with the nature and content of the course, not with what was charged for it; this practice of accepting credit on the relevance and merit of the course is not secret, and higher tuition charges, particularly without higher investment by the State in these courses, would convince no one that course quality against University System standards has been or will be improved.

5. The Credibility for the General Public of a College Transfer Tuition Increase to University System Levels

Although the general public is aware that there are substantial state cost subsidies for the operation of the Community College or University System institutions, they also believe that there are important differences in the total costs of operating the programs. Faculty credentials and salaries, or instructional support facilities such as libraries and laboratories that are provided by the University System, are more expensive than what is provided by the Community Colleges (where indeed the high cost programs are not the college transfer programs but the "hi-tech" work involving expensive equipment and faculty salaries competitive with those in such industries). Charging equivalent tuition would seem strange to many observers, and place the policy makers in a position of appearing to penalize those baccalaureate degree aspirants who would opt for or could only fit into the community college program.

Of course, it is only fair to recognize that effective traditional college and university level training for those not qualified in traditional terms may be more expensive in other regards--e.g., additional instructional time or individual attention by the instructor out of class is required, remedial services or learning laboratory support is necessary for a larger number of students. The Community College System institutions provide these through the administrative and instructional support allocations. Should an increase in tuition to University System levels require, for public accountability purposes, an audit of the cost elements in each system, this, in turn, could lead to regulations (if not changes in the allocation formulas) restricting some kinds of instructional support to college transfer support, which would be another difficult matter to resolve equitably, creditably, and without deleterious consequences for the occupational program students.

6. Revenue Implications of an Increase in College Transfer Tuition to University System Levels

Taking the simplest approach to this issue: Department records show that in 1984-85 15,838 credit FTEs were generated by the students enrolled in college transfer programs in the Community College System. (The credit FTEs are based on the more conventional concept of credit hour load, which is relevant to tuition charges and revenue therefrom, and is not the System FTE based on contact hours which determines allocations to the institutions.) Assuming that the numbers in 1986-87 would be the same as in 1984-85, together with assuming that college transfer students would be charged at the new rates for any course for which they register, and that no vocational or technical students would be assessed the additional charge if they take one or more college transfer courses, the increase in revenue for the State would be the difference between 15,838 credit FTEs at $153 per credit FTE and the same number of credit FTEs at $350 per FTE, or $3,120,086. This, to those concerned with fitting available funds to public needs, is a significant amount.

Yet: unless the logic of the arguments presented in the prior subsections on this matter is seriously flawed, the impact of the change in tuition rates could have a depressing effect on the numbers of students who would enroll. Thus, the additional revenues that would seem immediately in prospect are optimistic. If, as we suspect from other data presented in this report that increase in college transfer program enrollments increase, rather than decrease, the numbers enrolling in curriculum occupational programs, the decrease in revenue could be even greater than that provided in our esimate above.

7. A Concluding Observation

It has been noted that the overwhelming majority of respondents to the Institutional Questionnaire, as well as of the many others with responsibility for the System or one of its institutions and who were contacted, were not in favor of any tuition increase. Many of these noted that the tuition charges in North Carolina are among the lowest in the nation, but held firm on the recommendation that tuition charges (except possibly for self-supporting courses, where charges are necessarily a function of actual costs of delivery) not be increased.

A notable exception seemed to be the students and prospective students themselves, as well as some business and industry representatives who cover, as a benefit, costs for employees who enroll. The numbers and representiveness of those we contacted in this regard are seriously inadequate for any definitive findings, but the vast majority of students and prospective students indicated that modest increases in tuition--even doubling, considering the current low cost--would not have serious impact on their decision to attend or their continuing attendance. This point was made in instructive ways. For example, students almost always cited the costs of required books and equipment, which seemed to them to be about four times as much as tuition, as the significant cost, and while this came as a surprise to some, others considered it reasonable, given today's costs of living. Others make such statements as "Tuition for full-time work is less than what I'd spend on a portable cassette player or the price of a good meal in a nice restaurant." And, we had to take serious stock of the larger consequences implied by the reports of some respondents who stated, where queried about attrition rates and causes, that dropping a course after the drop-add period is of little consequence - "the student has so little invested in it." We note finally that of the total cost to the student for tuition, books, and transportation--estimated crudely in subsection G.2 as about $1163 per year--would increase by only about 13 percent if current tuition charges were doubled.

IV. CONCLUSIONS

A. Staffing

This task involved the determination of proper staffing patterns within the Community College System, with special emphasis on the implications for base and enrollment formula allotments. The essential strategy was to attempt to utilize associations among current staffing patterns and trends, on the one hand, and the variations among the institutions in program and enrollment mix that might require variations in staffing on the other, as an experience-bred indication of the necessary solutions that the institutions collectively have made or should make. The conclusions drawn from the findings reported in Section III are:

- There is a considerable degree of variability in staffing patterns throughout the 58 institutions in the System. While statewide averages in each major staffing category give an indication of broad staffing configuration across all institutions, considerable variations were noted even when institutions are grouped by size category or institutional status, or when positions are examined in the aggregate or by detailed job title.
- Few clear associations emerge between institutional characteristics and current staffing distributions. With the exception of clear statistical relationships (which were especially marked in the medium to larger sized institutions) between enrollment and all staffing except senior administrative staff in some instances, there were no other strong associations with factors reflecting enrollment mix or trends. This suggests that the institutional staffing patterns tend to be relatively unique, independent and varied institutional solutions, under local options, for accomplishment of the work required.
- There is widespread evidence across institutions in the System concerning the perceived inadequacy of current funding allocation procedures and formulas as they relate to staffing considerations. At least 90 percent of all institutions responding to the questionnaires indicated that current allocation formulas and procedures are inadequate in regard to salaries for faculty in both curriculum and extension programs, as well as for administrators. There is less

expressed concern for numbers of faculty positions generated as a function of FTE, although there is wide sentiment for some reduction of the ratio (from 22:1 to 20:1) to reflect the number of courses taught at less than one instructor to 22 students. Concerns are particularly strong about the extension instructor salary allotment.

- The two values that are used in generating the line item instructional allotment -- number of positions based on the prescription of one instructor per 22 FTEs, and per-position salary -- do not express the current realities of numbers of instructors employed and average salaries paid in the institutions. The number of full-time curriculum instructors, is usually less than the number of positions prescribed (with the difference potentially made up by fluctuating numbers of part-time instructors), and the average salaries actually paid are lower than the formula prescription. For the faculty member concerned about his/her salary level against the budget formula "standard," or the legislator concerned about either actual numbers employed or reasonable faculty salary scales, the formula values are thus misleading.
- The data from the earlier Department survey of administrative and instructional support staff suggest that the formula provides reasonably well for positions in the Senior Administrative category. While our data tend to corroborate these findings, respondents to our questionnaire noted that the base allotment of eleven administrative positions favors small institutions.
- The formula allocation is believed to be inadequate in providing for instructional support positions, and insufficiently responsive to salary differences among clerical jobs in urban as opposed to rural areas. Increases in part-time enrollment strain support staff who must give part-time students the same time as given to full-time students; and competitive salaries for clerical staff are higher in urban than in rural areas.

B. Methods of Calculating Student Enrollments

This task involved a determination of the most appropriate methods for calculating student enrollments with special emphasis on the most appropriate census date for collecting enrollment data. The findings evoke a number of implications for the formula budgeting process currently used to determine State operating formula allotments for the 58 institutions in the Community College System. The major conclusions, both for the general budgeting process and for the supporting enrollment data, are as follows:

- The current FTE-based system is the most appropriate basis for allocating operating funds to institutions within the System for covering instructional costs. This system represents a widely acceptable, easily understood basis for budgeting funds to institutions. It also compensates more adequately for the variations in instructional time per hour of credit that exist in the System institutions' programs. Student enrollments also form the basis for legislative allocations to the other two major publicly-supported educational systems--public schools and higher education--in North Carolina. Selected weaknesses of this basic approach (e.g., historical enrollment data provide an imperfect basis for establishing new directions or responding to new opportunities) can be addressed by special incentive programs specifically established to allocate a portion of total System appropriations.
- A basic principle of the budgeting process should be to reimburse institutions for actual costs of providing instruction and other services to students. This conclusion reaffirms the basis of the current resource allocation process, although, as pointed out below, the factors currently used in this process do not provide an accurate measure of current costs. Within this system, established audit procedures assure the legitimacy of claimed costs while continuing competition for student enrollments, particularly in this period of declining size of the age cohort that traditionally participates in postsecondary educational opportunities, assures the continuation of competitive pressures to lower costs.
- Within this basic process, data should be collected to measure the workloads faced by the institutions and the costs of serving these workloads. Student enrollments are the obvious choice of workload measure for educational institutions. Costs of serving these enrollments reflect the time and other resources used by instructional and

support staff. Due to the instructional technology that is currently used throughout the System, the time spent by students in actual classroom/laboratory attendance provides, as noted, the most appropriate and comprehensive measure of these time commitments.

- The basic elements for reporting these workloads and associated costs are currently in place in the institutions throughout the System. Various data bases and reporting systems--registration, academic grading, financial--are being integrated at the institutional level through the Prime minicomputer and associated software systems. Institutions are currently using these hardware and software systems both for their own internal management purposes and for reporting appropriate data and information to the Department of Community Colleges.
- The factors used to develop the System's overall state operating budget and to allocate these funds to individual institutions do not provide accurate measures of the costs of serving the student workload in the System. The current factors do recognize certain differential costs of providing services (e.g., the higher costs of instructional services for curriculum than for extension programs). However, the relationships among many of these factors were established several years ago. The maintenance of certain fixed factors (e.g., student/teacher ratios) and the granting of across the board relative increases for others does not reflect changes in underlying conditions in the labor markets for instructional and supporting staff or technological changes in providing instructional and other services. The result is that the current allocations do not reflect the current costs of providing services, as evidenced by an excessive number of institutional requests for budget reallocations throughout the operating year.

C. Impact of More Part-Time Students on Need for Administrative and Instructional Support Personnel

This task, related closely to issues raised in the task reported in Subsection A of this section, involved the determination of whether the shift to more part-time students has had impact on the need for administrative and instructional support personnel. The principal conclusions need to be viewed in terms of a summary of principal findings. These findings are:

- At the System level: Over the period from 1978-79 through 1984-85, there have been sharp and continuing increases in the number of one-quarter time curriculum program students. The number of full-time students increased slightly from 1978-79 through 1981-82, but has been declining sharply and continuously since then. There have been only slight increases in half-time and three-quarter time enrollments. There have been continuing increases in the UDHC since 1978-79, and decline in the contact FTE since 1982-83.
- At the Program level: Enrollment trends by program within the curriculum area vary from program to program. Increases in one-quarter time students in the technical programs and in college transfer programs, particularly since 1983-84, have been sharp, while they are less marked in the vocational programs where full-time students still predominate.
- At the Institutional level: Enrollment trends in terms of the proportions of full- and part-time students also vary sharply among the institutions.
- Institutions also vary substantially in the change in UDHC relative to contact FTE over the period reviewed and at the present time. For example, in 1984-85, six institutions had from three to four times as many UDHCs than FTEs, while two institutions had more than eight times as many UDHCs as FTEs.
- No marked associations were found, however, between UDHC numbers of students and institutional ratings of inadequacy of allotment formulas based on the FTE for determining numbers of administrative and instructional support staff, or between institutional rates of change in numbers of UDHC relative to FTE students and perceived inadequacy of the FTE allotment formulas.
- Through survey of currently enrolled students, it was found that although some services (e.g., assistance in getting financial aid) are viewed as very important by only slightly smaller numbers of part-time students than full-time students, part-time students, consider various support services as very important in significant

numbers of instances and to degrees approaching those for full-time students. Students enrolled for three-quarter loads not infrequently rate the various services as very important more frequently than do full-time students.

- *It was also noted that increasing numbers of less than full-time students may, in practice, affect instructional needs as well*. For some institutions, the change has been one of increasing numbers of evening students for programs for which there is also a day-time class demand. This involves a consequent need to offer the courses in larger numbers of smaller sections, which reduces the adequacy of the FTE-based allotments to meet actual costs.

Our principal conclusions are:

- *It is concluded, from the student data as well as from the report of the institutions, that many administrative and instructional support positions are determined by the actual number of students, with little relationship to their FTE equivalent. Affected are position categories such as accounting clerks, librarians, counselors, financial aid officers, placement and follow-up staff, registrars, and testing specialists*. That no differences were found in the perceived adequacies of the FTE-based allotment formulas among institutions as a function of UDHC/FTE mix is believed to be explained by other forces. First, the institutions are operating under extreme stringencies of budget. Second, each institution has some flexibility in assigning allocations to positions. Third, increase in numbers of positions that operational necessities impose if the institution is to operate, such as the accounting clerks that must process registrations and fee payments, are met, but at the expense of other positions less critical to operation.
- *The unduplicated headcount (or UDHC) (rather than numbers of students registered for various academic loads) appears to yield the most suitable index for determining costs for the affected non-instructional positions*.

D. The Effectiveness of Governance, Administration, and Programs in Fulfilling the System's Mission

This task involved the determination of whether the System's governance, administration, and programs are effective in fulfilling the System's mission. The principal findings and conclusions are:

The State Board:

- There is agreement, by the members of the State Board and among the members of the other governance and administrative authorities, on the role and responsibilities of the State Board; this role and these responsibilities are not discrepant from those prescribed by key statutory and regulatory authority. It is a new Board, having assumed full responsibility for the System on January 2, 1981, and is necessarily still in the process of developing its policies and strategies. At the institutional level as well as at the Departmental and State Board levels, there is strong agreement that it is the proper locus for determining and effectively representing the needs of the System as a whole to the General Assembly, and for policy and oversight for the System.
- However, there are mixed evaluations, by those involved and the other parties, on the current strength and effectiveness of the State Board. Some believe the Board does not use the authorities it has; others see its authority too often pre-empted by the General Assembly, particularly in the independence with which special allocations are granted to the institutions; still others feel that there has been real progress and genuine accomplishment in its recent formal actions and less formal interactions.
- We conclude that the System needs a strong and centralized governance authority, and that the State Board represents this prospect and has made good progress toward its attainment. Yet, the Board needs to be strengthened. This can be achieved through its own deliberations and actions, through the judicious selection of matters brought to its attention by the State President, by the nature of its interactions with the local boards and presidents, and possibly through structural changes that are the discretion of the General Assembly. Its responsibility to and credibility with the General Assembly needs to be

enhanced, not in any way contrary to the specification of its role and function, but through enabling the sharpening and maintenance of its perspectives on the needs of the State relative to the educational mission of the System, and the policies that would facilitate the cost and operational effectiveness of the institutions in their fulfillment of that mission.

The Local Boards:

- The functioning of the local boards, in regard to their responsibilities for their communities and institutions, is generally found to be exemplary. Recent changes in their structure and appointment procedures may have politicized these bodies more than many current members and presidents feel is desirable, with particular regard to the difficulty some local school board members may have in representing equitably both educational system interests. There is interest in and need for increasing interaction with the State Board, toward informing the State Board of local needs and interests, and toward understanding the policies and requirements that the State Board establishes to guide their functioning and the institutional solutions to local needs. On the whole, however, the effectiveness of these bodies in assuring the success of their institutions in fulfilling their mission within their designated communities attests to the intrinsic wisdom in their structure, and to their experience over the course of the development of the System.

The State and Local Presidents:

- We find that the State and Local presidents are, in general, operating with considerable integrity and administrative skill. They represent, on the whole, a devoted, knowledgeable, and skilled resource for the administrative responsibilities of educational program development, delivery, and maintenance, and collectively serve the State well in this regard. Although occasional instances of mismanagement or errors in judgment exist as would be expected in so large and diverse a group as the local institution presidents represent, we find such instances rare (though they may frequently be blown out of proportion by vocal critics), and are problems bred in most instances by the presidents' concern for their communities and students on the one hand, and the fiscal austerities under which they operate on the other. And although local presidents are seen by some as desiring more local autonomy than may be desirable, or as too much consumed with their own vested interests, they implicitly and explicitly manifest the need to operate together as a System, and to be guided by strong though sensitive leadership at the System level.

- Our principal conclusion is that the fielding of the educational programs, and the response of the students and local community and business leaders to this resource, represent the bottom line of mission attainment. That the mission is indeed effectively attained is manifest vividly at the local levels. We find no serious challenges from the current governance and administrative structure, to a literal interpretation of the mission as prescribed by the General Statutes. We also believe that mission attainment is serving the State, its people and its economic development, and the quality of life in North Carolina, remarkably well.

E. Conversion of Technical Institutions to Community College Status

This task was concerned with determining if the System's mission is best served by permitting technical institutions to convert to community college status. Our principal overall conclusion is that this is a matter that can only be resolved by the State Board and General Assembly through attention to the validity of all the issues involved, including the implications for mission and the support necessary to secure adequate quality of the programs. The issues found to be relevant are:

- The association of higher quality with true community college status is a real and pervasive perception of the prospective students, and, to some extent, the communities. Yet, while the institutions value this perception for its role in attracting students who may profit from their services, and although they recognize intrinsic values for the institution in conversion, their predominant concern appears to be continued service in the full and honest expression of the enhancement of educational opportunity without jeopardy to the vocational-technical mission of the institution.

- Conversion to full community college status has been found, through the later experience of the institutions converting to community college status since 1968, to be associated with enrollment increases not only from new student markets in their communities from individuals who are interested in this program, but also from enrollment increases in their vocational and technical programs as well. There is also a positive impact potential of the college transfer program on the quality of the vocational and technical programs.
- The issue of threat to enrollment levels at other public and private colleges does not seem to be real; it is more likely that conversion ultimately enhances, not diminishes, the college enrollments outside the System.
- There is a wide, though uneven, acceptance of transfer credit by the senior institutions of technical institution courses, and in a sense the institutions are all performing a function of enabling students to progress beyond the institution limits in postsecondary attainment, whether technical institution or community college, through the acceptability of work for transfer credit.
- Conversion of additional technical institutions, or all technical institutions, to community college status, will have real cost implications (which, to some extent, are predictable). Given that current opportunities are sometimes available to communities without community colleges through similar institutions within reasonable commuting distance, that conversion involves increased costs to the State, that minimum numbers of students are needed for efficient operation, and that some communities are interested in maintaining the devotion of their institutions to the vocational/technical role, it is not likely that all technical institutions would, should, or could be readily converted to community college status at one point in time.
- The ultimate question, for resolution by the State Board and the General Assembly, is a matter of how much value will be added for the people and economy of the state by continued if selective conversion of technical institutions to community college status, and how much the state can spend and is willing to spend to achieve this value.

F. Comparability of Tuition for College Transfer Courses to UNC System Tuition

The matter of whether tuition for college transfer courses should be comparable to tuition charged by the constituent institutions of the University of North Carolina was considered, within the time and cost limits imposed, to be better addressed by informed and logical analysis than by empirical research. Our principal conclusions are as follows:

- Tuition for the college transfer student would increase by a factor of approximately 128 percent over current charges if the lowest University System rate were charged. Tuition charges for a full-time in-state student in the System's college transfer program are now $153 for a full academic year. Tuition charges for a similar full-time student in a baccalaureate institution of the UNC System are $350 (which is the lowest of three tuition rates currently charged as a function of the particular level of institution).
- Any increase in tuition charges for the Community College System is vigorously and almost unanimously opposed by the institutional representatives. Those respondents questioned feel that such a decision would deny access to a large portion of their student or prospective student constituents, or would remove the incentive provided by the current low costs for enrolling in this program.
- The increase in costs for the student appears less significant when total costs associated with community college attendance are considered. Given other fixed costs, conservatively estimated, for a full-time student for one academic year, of $660 for transportation, $300 for textbooks, and $50 for fees, the current total is $1163. The total assuming the University System tuition rate would be $1360, an increase of only about 17 percent over current costs.
- An increase in tuition charges to University System levels is difficult to reconcile with the differential per-student investment by the State to the two systems, and with the other differences between the two settings that these investments support in part. We also note that many vocational or technical programs are more costly to operate than college transfer programs, and that a credit hour (for which tuition charges are assessed) is less likely to express adequately

the contact time (on which budget allocations are based) that is required in vocational/technical programs.

- There are prospective operational problems of some magnitude for the institutions if either vocational or technical program students taking college transfer courses as part of their vocational or technical program pay a different rate for these courses than for their program courses, or prospective discriminating against college transfer program students in comparison if the other program students are charged at their program rates.
- The general fund revenue from the increased tuition charge would increase by an amount of approximately $3,120,086 if the total number of credit hours for which college transfer students register is the same as in 1984-85, and if these credit hours are all in college transfer program courses. This should be considered an upper limit for potential revenue increase because of the possibility that reduced enrollment in college transfer programs would result from the increased tuition rates.
- Modest increase in tuition costs would not, we feel, impact significantly on enrollment. Students or prospective students contacted indicated that against the more significant costs of books and required equipment, and other necessary costs, tuition charges are relatively insignificant.

V. RECOMMENDATIONS

This final section presents the recommendations that the research team draws from the findings and conclusions of the several tasks. Because of the common concern with staffing of tasks 1 and 3, as these tasks were specified by the General Assembly, the recommendations in this regard are presented together in the initial section, followed by the recommendations drawn from the findings of the other four tasks.

A. Staffing

It is recommended that the State Board of Community Colleges:

1. Reduce the discrepancy between the actual number of positions and actual salaries paid to curriculum and extension faculty, and the numbers of positions and the dollar amounts used in the allocation formulas. There is some confusion, in particular, in the use of the salary units for curriculum and extension faculty in the budget formula. While the unit dollar values are perceived, by the Department of Community Colleges, as necessarily artificial amounts for allocation purposes, they are viewed as normative by some institutional staff. The discrepancy between these unit salary amounts and the average salaries for full-time curriculum and extension faculty (or between the numbers of staff positions prescribed and the actual numbers employed), are considerable. Further analyses are necessary to determine the impacts of differential formula unit/salary structures on the overall State Budget, as well as on institutions. It is important, however, to go further than was possible in this study to examine the adequacy of salary structures in comparison with competitive employment in the state as well as the nation, and the implications for position and salary allotments in both curriculum and extension categories of instructional staff.
2. Base the additional allotment for Administrative and Instructional Support staff positions (beyond those in the base allotment) on the unduplicated headcount rather than the FTE used for instructional allotments. From the perspective of workload, the FTE is a less meaningful unit of measurement for administrative and support

services than headcount enrollment. Student services must be provided equitably without regard to the full-time or part-time status of the students. Funding positions on the basis of FTE therefore results in critical personnel shortfalls in administrative and instructional support, and particularly clerical, positions. In addition, the growing number of adults anticipating or participating in continuing education presents a different population, with different expectations from traditionally younger postsecondary students. Further analysis is needed to implement this recommendation. Since institutions appear generally to have met these necessary position requirements under local options for budget assignment, determination of the per UDHC unit cost may be established through audit of current costs for such personnel. Basing a UDHC formula upon accommodation of current staffing levels will ensure a "hold harmless" provision, thereby guaranteeing no unfair loss of funds to any institution.

3. Improve on data sources for intra-year utilization of part-time faculty, and the extent to which part-time instructors are supplanting full-time instructors throughout the State. Information is currently available at the state level on numbers of part-time faculty by institution. However, these are annual statistics, compiled for the fall of each year, providing at best a "snapshot" for state administrative purposes. Little systematic information is collected however on the institutional ebb and flow of these appointments during the year, largely because of the reporting burden such data collection efforts would represent to institutions, and in addition, because of no clear statutory requirement on which to base such a request. We do not want to recommend unnecessary additions to the already considerable data burden at both the local and state level. However, in view of the substantial reliance on part-time faculty reported by institutions during our study, it seems important to assess periodically the characteristics of this component of instructional staff across time, and also to look at quarterly trends for at least a sample of institutions.

4. Incorporate into budgetary allocation formulas explicit funding set-asides to be directed exclusively to staff development. Almost all the institutions in our sample stressed the inadequacy of the present resources for staff development, and the need for keeping instructional staff up-to-date on both technological developments and instructional methods. One way of signalling public commitment to faculty development is to provide direct incentives through setasides in the allocation process. These funds should be used at local discretion under guidelines set by the State Board of Community Colleges, but only for staff development, and should include but not be limited to such activities as attendance at technical seminars, professional meetings, formal graduate training, and brief periods of experience in private sector jobs related to instructional responsibilities.
5. Permit the use of volunteer instructors in generating limited numbers of budgeted FTE positions. Considerable human resources are potentially available in local communities for use in volunteer instruction. Surrounding businesses may have skilled employees willing to volunteer their services. Growing numbers of retired people in some areas of the state constitute a wealth of skilled, and in many cases experienced instructors. Where appropriate, these sources could be tapped for voluntary participation, and if they were permitted to generate FTEs, would free up fiscal resources for other positions. Present policy requires that 60 percent of instructional services must be supported by state funds in order for those services to generate FTEs. This restriction should be relaxed to permit use of volunteers in generating FTEs. A cap should be set on the maximum amount of FTEs permissibly generated by this means, for example 10 percent of total FTEs.

B. Methods of Calculating Student Membership Hours

It is recommended that the State Board of Community Colleges:

1. Calculate student membership hours on a quarterly basis at the end of an official drop/add period. This drop/add period, which should be incorporated into the instructional process, represents the time at

which final commitments are made for the quarter to both faculty and students. As such, it represents the best point in time at which to measure the size of the teaching workload for the quarter. Although institutions can be given some flexibility in establishing the specific date for the end of the drop/add period, in general it should fall within the first 25 percent of the quarter's instructional process. Final collection and reimbursement of all tuition and fees should be tied to this date to provide a basis for subsequent audits of both enrollment and financial data. All enrollment supported by State funds should be reported on this date, with the exception of multiple entry, multiple exit courses, for which special procedures should be developed.

2. Link student registration, grade reporting, and fee payment data into a comprehensive information system to support and provide timely and accurate enrollment calculations for allocation formula purposes. The basis for this integrated management system has been implemented at most institutions with the installation of the Prime computer and associated software. Appropriate refinements to the data management and systems reporting software should be implemented to support the improved enrollment calculations. State financial support should be provided for appropriate systems analysis staff at each institution. State level financial support for development of appropriate software systems and staff training is also required.

3. Continue the current definitions for calculating quarterly FTE enrollments. The principal purpose for using FTE enrollments in the budgeting process is to develop an accurate measure of the workload involved in providing instructional and other services to students. Since the instructional allotment accounts for approximately two-thirds of the total State operating formula allotment, and since the FTE-based formula will continue, it is essential that the FTE calculation provide a valid measure of the workload for instructional activities. Actual time spent in class, or membership hours, provides the best measure of this workload. This is particularly true in view of the substantial variation between membership hours and

credit hours for a given curriculum across the institutions in the System.

4. Continue to base budget allocations on quarterly FTE figures. As indicated above, under the current budgeting approach, the FTE figures should provide a valid measure of workload throughout the academic year. Given the magnitude of the quarterly variation in FTEs, it is appropriate to base the annual budget figure allocations on these quarterly figures.

5. Retain the current basis for calculating curriculum FTE enrollments on the traditional academic quarters. The current procedures provide implicit recognition of the relatively higher costs of curriculum over extension programs by basing the budget FTEs for curriculum programs on the highest three quarterly enrollments rather than on a four quarter average. Although detailed cost figures were not obtained or developed during this study, interviews indicated that the costs of curriculum instruction do in fact exceed those of extension instruction. In the general agreement among the institutional presidents that the FTE is the most appropriate basis for determining costs of instruction, and the fact that the current formula budgeting process does not accurately reflect actual costs of instruction, changing the basis of calculating curriculum enrollments would merely substitute one uncertain procedure for another. Substantive changes in the formula should only be undertaken to provide a more accurate reflection of actual costs of instruction, as included in a subsequent recommendation.

6. Develop a regular program for auditing enrollment figures and more timely dissemination of the results of these audits to all institutions in the system. Given an FTE-based budgeting process, incentives will remain at the institutional level to achieve a higher share of systemwide FTE enrollments. Linking the quarterly census date for calculating enrollments to the end of the drop/add period, with an attendant combined audit of financial and enrollment data, will help to alleviate these pressures. Widespread distribution of each institution's audit results throughout the System as they become

available will strengthen a self-policing system with appropriate peer pressure to reduce abuses.

7. Revise the current budgeting process to recognize explicitly that institutions should be reimbursed for actual costs of instruction. The current budgeting system implicitly recognizes variations in costs of instruction by providing differential funding across program areas. However, the current funding levels do not reflect the variations in these instructional costs in an accurate manner, and tend, in particular, to force occupational extension program delivery to operate under particular stringencies. Explicit recognition of this principle and adoption of appropriate revised budgeting procedures should be considered by the Board of Community Colleges.
8. Conduct a detailed study of actual costs of instruction and develop revised budgeting formulas to incorporate these costs. This study should measure the effects of variations in instructional programs, institutional size, different location, etc. on instructional costs. Particular attention should be devoted to assessing the marginal, or incremental, changes in these costs due to changes in enrollment levels over time. The results of these detailed analyses should be incorporated into the formula budgeting process, with the assurance that no institution's financial position would be adversely affected by the introduction of the new allocation process.

C. Governance and Administration

The issues raised by the General Assembly in the area of effectiveness of governance and administration involve several responsible parties in addition to the State Board. Accordingly, recommendations are presented separately for the several parties.

It is recommended that the General Assembly:

1. Maintain the present overall governance and administrative structure of the System.
2. Recognize the need for strong leadership by the State Board, and the particular relevance of this body for understanding and representing to the General Assembly the educational process and fiscal requirements for the highest quality educational and training program consistent with the necessary budgetary constraints.

3. Consider the kinds of authorities it is willing to delegate, in actuality, to the State Board, and then determine, through its deliberations, if the structure of the State Board should be amended to assure more effective accomplishment of its delegated power and authority. In these deliberations, the General Assembly should be sensitive to any negative aspects of politicization of the Board, to the size of the Board for maximal operational effectiveness, and to the need for representation among the members of those who understand policy-making for the educational enterprise as well as those who may capably represent the interests of the particular constituencies--the citizens, the community, and business leaders, and those concerned with the economic development of the State--that the System and its institutions serve.
4. Give particular consideration to the deleterious impact, on the System as a whole, of the tradition of special allocations to individual institutions by the General Assembly. The impact of the special allocation tradition is generally perceived, at all levels of governance and administration in the Community College System, as a matter of putting individual institution interests over the needs of the System, and as encouraging ascendancy of individual institutions over the System as a whole. The recommended consideration is a matter, for the General Assembly, of reaffirming the role that the State Board and Department should in actuality assume in assuring the equitable distribution of available funds, and the centralization, toward State interests, of authority and control of educational aspects by the most appropriate authority.

It is recommended that the State President and State Board:

1. Continue the focus on the priorities for the effective management of the System through informed policy that is sensitive to the needs, both for necessary resources for the institutions, and for the necessary controls at both the System and local levels in regard to the operation of the local institutions. This may involve such mechanisms and strategies as: studies to determine the long-range needs that institutions must serve for the technological development that may be expected to occur in the future; studies to determine the

condition, quality, and appropriateness of equipment used in instruction and training; studies to determine the actual costs of program operation; consideration of the educational programs not only in terms of their quality but also if undesirable (from affordability standpoints) duplication of costly function exists among institutions near one another, or if consortium arrangements may provide more cost and quality effective solutions. The State Board should also seek to establish, through a consensus with the other policy makers for and operators of the institutions, the consequences as well as the impact of regulatory procedures employed.

2. Consider ways in which the interactions between the State and local boards may be enhanced to mutual advantage. This may involve more frequent personal contact, in appropriate forms, between members of the two parties on matters of mutual concern, and particular advisory roles for the chairpersons of the trustees association and for the association of presidents.
3. Increase the on-site familiarity of the Department senior staff with the local institutions, through appropriate forums, two-way travel, staff exchanges, and the like.

It is recommended that the Local Institutional Boards and Presidents:

1. Continue the current styles of local oversight and management that serve the communities so well, but
2. Recognize the needs for, and strengths of, a centralized authority that may represent the needs of the System as a whole to the General Assembly, and provide equitable governance and management across the institutions toward their collective improvement. This involves both the communication by the local institutions to the State Board and Department of experience-based insights, and the recognition of the need for the State Board to set limits on individual actions that facilitate and assure the effective attainment of System goals and objectives for the State as well as the institutions.
3. Continue to recognize that a prime responsibility of the local boards is to select and evaluate the president. The president is their agent not only for the proper management of the institution but also for keeping them appropriately informed so that deliberate action, rather simple review and approval, may be taken.

D. Conversion of Technical Institutions to Community College Status

Information possible to assemble under the time and cost constraints of this study, as well as the complexity of the issues, preclude any sweeping recommendation such as the conversion of all institutions to community college status or the removal of this function from the established and approved mission of the existing community colleges. Exploration of the more substantive issues, however, leads to the following recommendations:

1. Toward obtaining information on which reasonable recommendations to the General Assembly may be made for institutions desiring to convert to community college status, the State Board should augment its current information requirements. These requirements should specifically and explicitly place the burden of proof on the applicant institution to show that the occupational emphasis of the institution, and the quality of its vocational and technical curriculum programs, would be enhanced rather than diminished; that a college parallel program of specific substance has been planned and designed, and that the necessary instructional and instructional support resources can be acquired; and that senior institutions in the assigned geographic area generally endorse, by willingness to accept transfer credit, the addition of the college parallel program.
2. The State Board should determine, and the Fiscal Research Division of the North Carolina General Assembly should confirm, the probable net increase in costs to the State that would accrue with conversion of institutions to community college status. "Net Increase" is defined as the difference in required support based on expected FTE, and the expected revenue to the General Fund that would be generated by expected increase in revenue from tuition. The recommendation of the State Board to the General Assembly should take into consideration and report the impact of this cost in its recommendation.
3. The State Board should also establish minimum enrollment requirements not only for total college transfer enrollment in the initial program year, but for numbers of enrollees in the second year of studies. The purpose of this recommendation is to assure that sufficient numbers of second year students would be available in a reasonable time to make second year required course offerings reasonable and cost effective.

4. Recommendations by the State Board for the addition of specific college transfer programs, and for conversion of the applicant institution to full community college status, should be based on a deliberate determination of the value added to the System. No factual basis is found for the assumption that a community college transfer program threatens or unfairly competes with public or private senior institutions; instead, the college transfer program, as constituted in the System, offers unique opportunities not otherwise available both to potential 4-year degree aspirants and to the vocational/technical program students for personal enrichment. However, attention of the State Board should be directed not only to the interest of the applicant institution in developing such a program, but also to the current availability of such System programs in the general area of the applicant institution.
5. The State Board should commission or conduct a study of programmatic functions currently performed by the System institutions and their specific costs, toward removing excessive duplication, among institutions within specific geographic areas, of high cost programs. Although the legitimacy of community needs for and support of particular vocational and technical programs cannot be refuted, some vocational or technical programs are of significant expense to the State. Particularly where several similar programs exist near one another, and/or program enrollment in a particular institution is grossly inadequate for operational cost recovery, consideration should be given to the more reasonable costs and quality that could accrue from consortium presentation, or from allocation of function to a particular institution.

E. Tuition Charges for College Transfer Courses

In regard to tuition charges for college transfer courses, we recommend:

1. Differential pricing for college transfer courses in comparison with other curriculum program work, particularly differential pricing inversely related to costs, should not be enacted. Uniform rates per credit hour of instruction should be maintained. This is not only a matter of operational difficulties that would be entailed, but also

the need to prevent undue status differentials that would accrue and that would deter vocational and technical students from participating in courses also appropriate for their programs.

2. *The State Board should consider recommendations to the General Assembly in regard to modest tuition increases*. The burden of current tuition costs is not perceived by many prospective students or students as of much significance. Considerations of tuition increase should, however, take into account total costs to the student that are associated with attendance, and the potential impact on educational opportunity and enrollment, as well as the potential for increased General Fund revenue that might offset the costs of more adequate funding of the System institutions.

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